

Scale

In-Between:

Push Relax

Breakdowner

Pose:

Copy Paste

User Ortho

head

neck

shoulder.R

armup.R

amlow.R

thumb.R

hand.R

body

legup.R

leglow.R

foot.R

shoulder.L

armup.L

amlow.L

thumb.L

hand.L

legup.L

leglow.L

foot.L

(1) Armature armup.L

View Search All Scenes

World

Armature

Armature

Transform

Location: Rotation: Scale:

< 0.000 > < 0° > < 1.000 >

< 0.000 > < 0° > < 1.000 >

< 2.953 > < 0° > < 1.000 >

Rotation M XYZ Euler

Delta Transform

Transform Locks

Relations

Layers: Parent:

Object

Pass Index: 0

Groups

Add to Group

Operator

View Select Pose Pose Mode

Global

Start: 1 End: 250

View Marker Frame Playback

Välj överarmsbenet och rotera det.

Underarmsbenet följer med i överarmsbenets rörelser

Det här kallas Forward kinematics.

Scale User Ortho

In-Between:

Om man istället vill kunna
få överarmsbenet
att följa underarmsbebenes
rörelser
så måste man skapa
Inverse kinematics.

Börja med att markera
underarmsbenet.

Repeat:

Repeat Last

History...

Grease Pencil:

Draw Line

Poly Frase

▼ Operator

View Select Pose Pose Mode Global

(1) Armature amlow.L

View Search All Scenes

World

Armature

Armature

▼ Transform

Location:	Rotation:	Scale:
< 0.000 >	< 0° >	< 1.000 >
< 0.000 >	< 0° >	< 1.000 >
< 2.953 >	< 0° >	< 1.000 >

Rotation M XYZ Euler

► Delta Transform

► Transform Locks

▼ Relations

Layers:	Parent:
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> Object

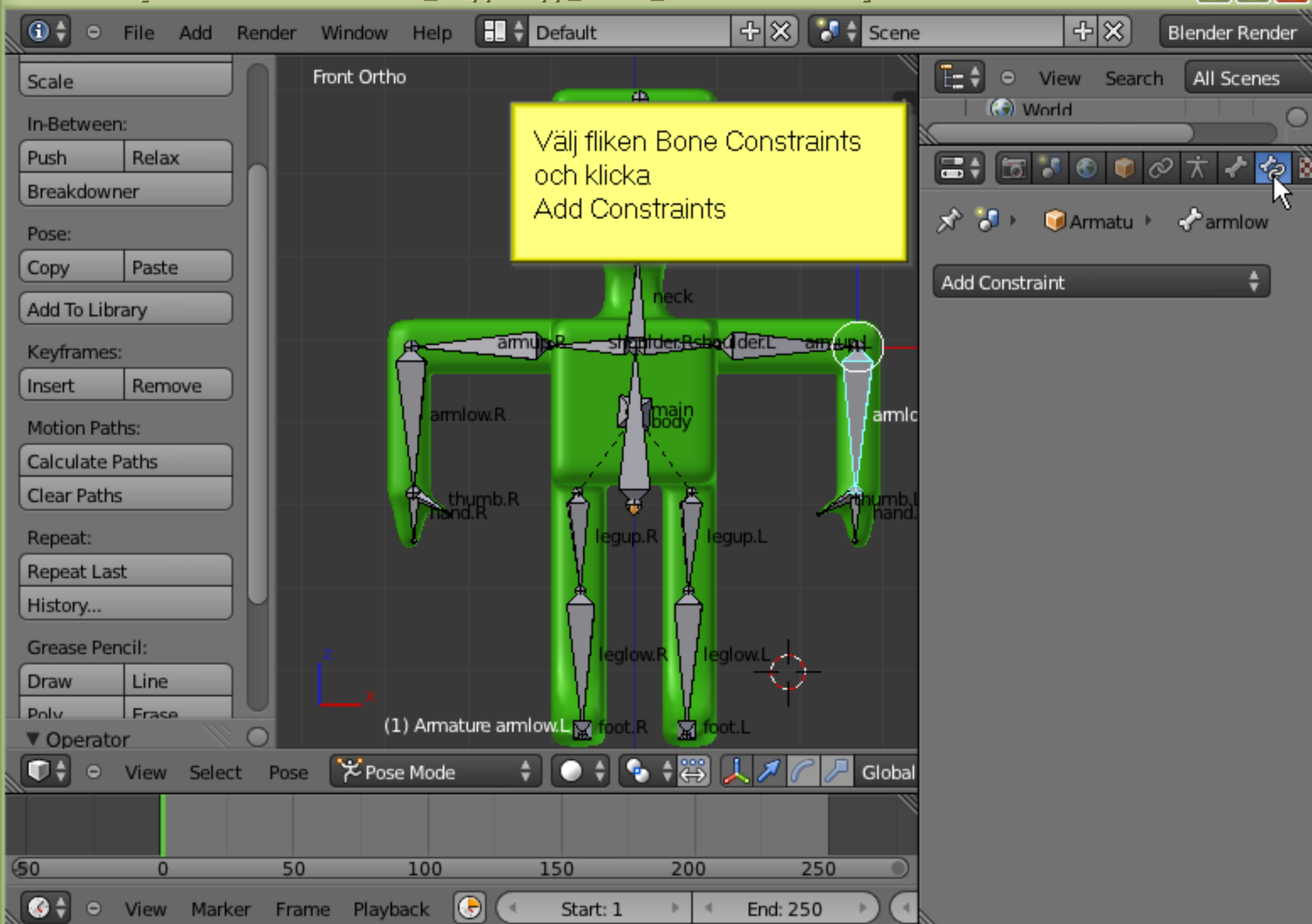
< Pass Index: 0 >

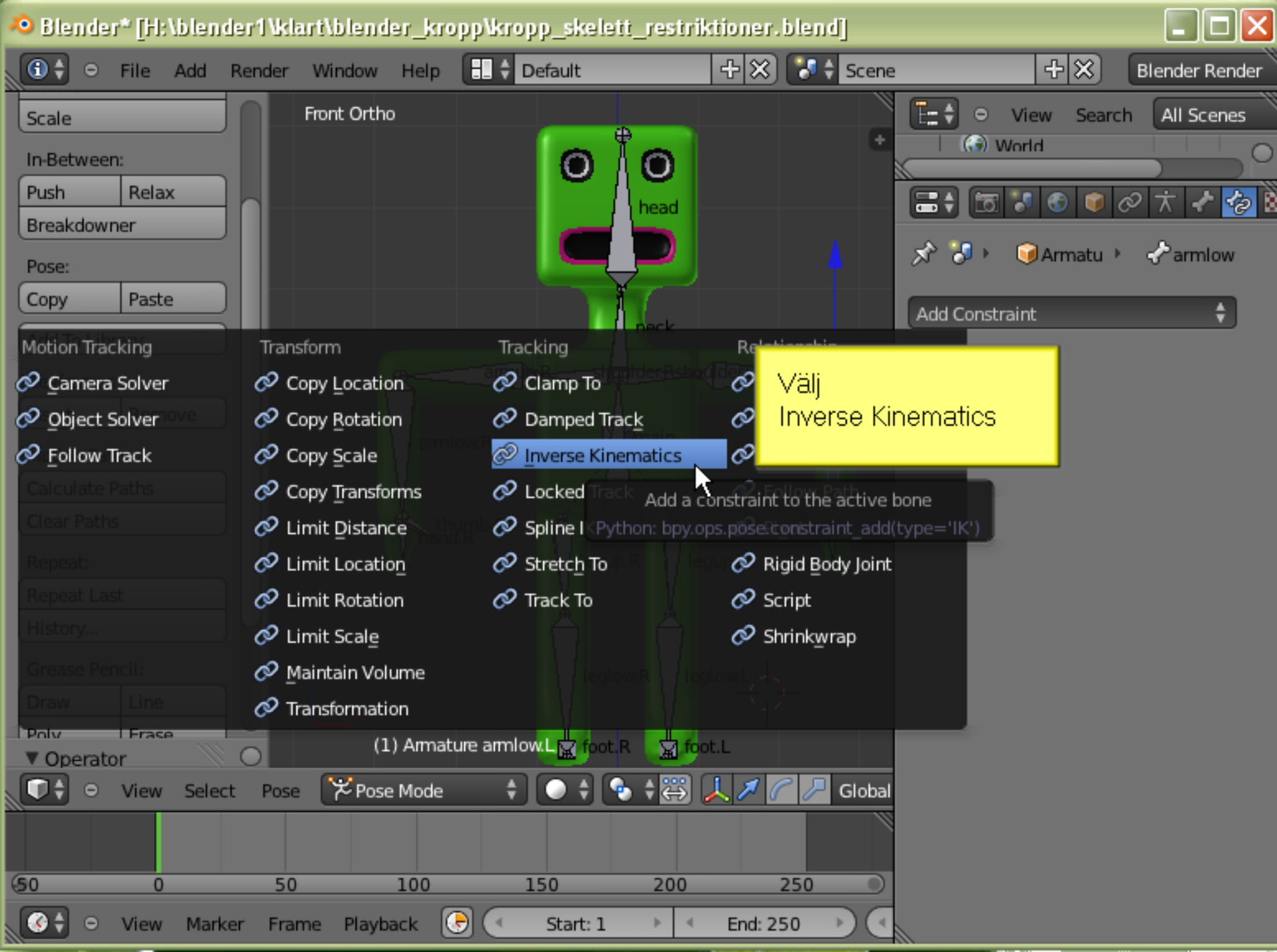
▼ Groups

Add to Group

+

View Marker Frame Playback Start: 1 End: 250





Scale

In-Between:

Push Relax

Breakdowner

Pose:

Copy Paste

Add To Library

Keyframes:

Insert Remove

Motion Paths:

Calculate Paths

Clear Paths

Repeat:

Repeat Last

History...

Grease Pencil:

Draw Line

Polv Frase

▼ Translate

D: 1.1187 (1.1187) global

Front Ortho

Labels in image: head, neck, shoulder.R, shoulder.L, armup.R, armup.L, amlow.R, amlow, thumb.R hand.R, thumb hand, legup, leglow, main body, foot.P

(1) Amature amlow.L

Add Constraint

IK IK

Target:

Pole Target:

Iteration: 500 ☒ Use Tail

Chain Len: 2 ☒ Stretch

Weight: ☐ Target ☐ Rotation

Positi: 1.000

Rotat: 1.000

Influence: 1.000

Välj
Chain Length: 2

Och dra i den blå
pilen för att flytta
underarmen och
överarmen
följer med.

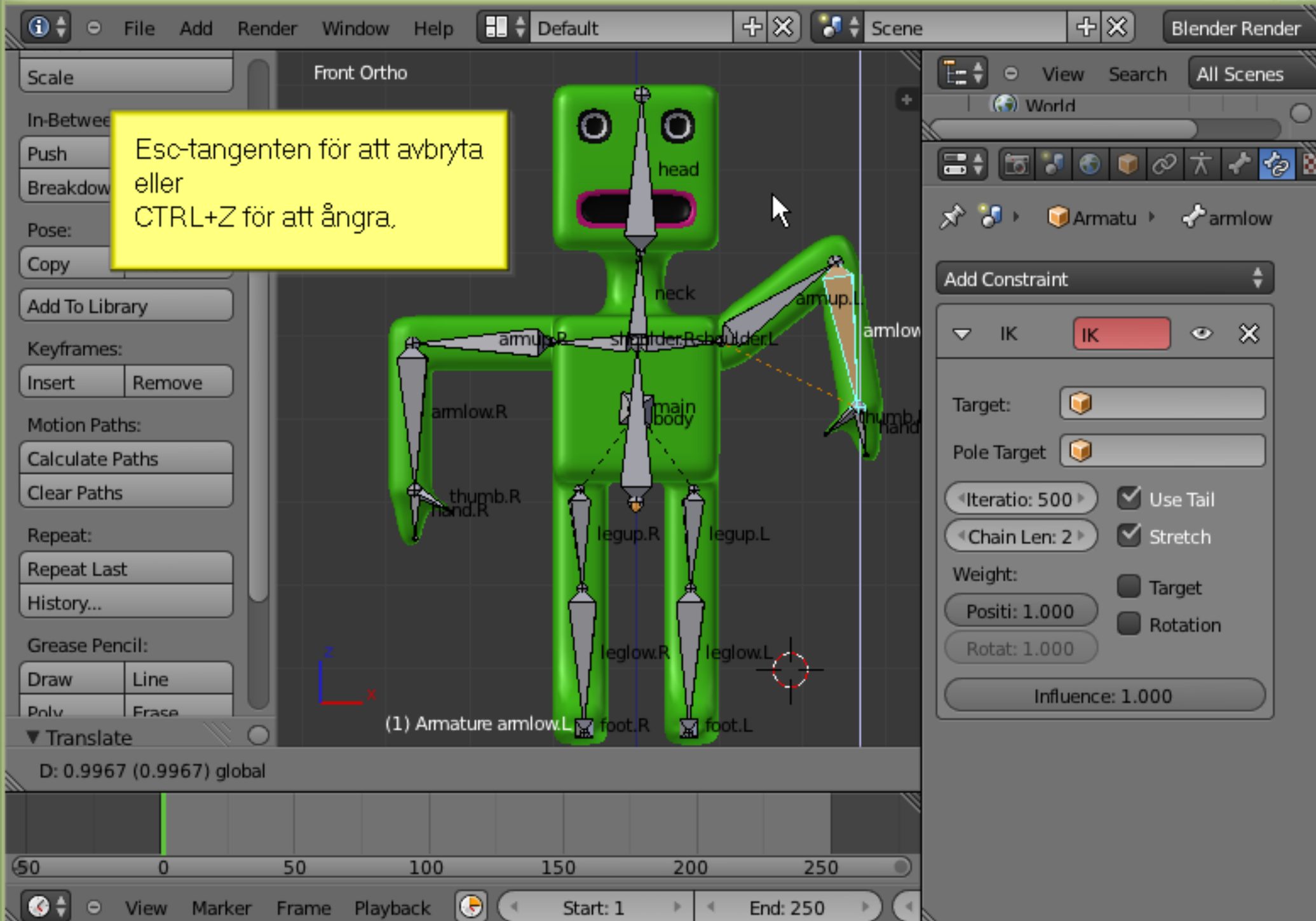
View Search All Scenes

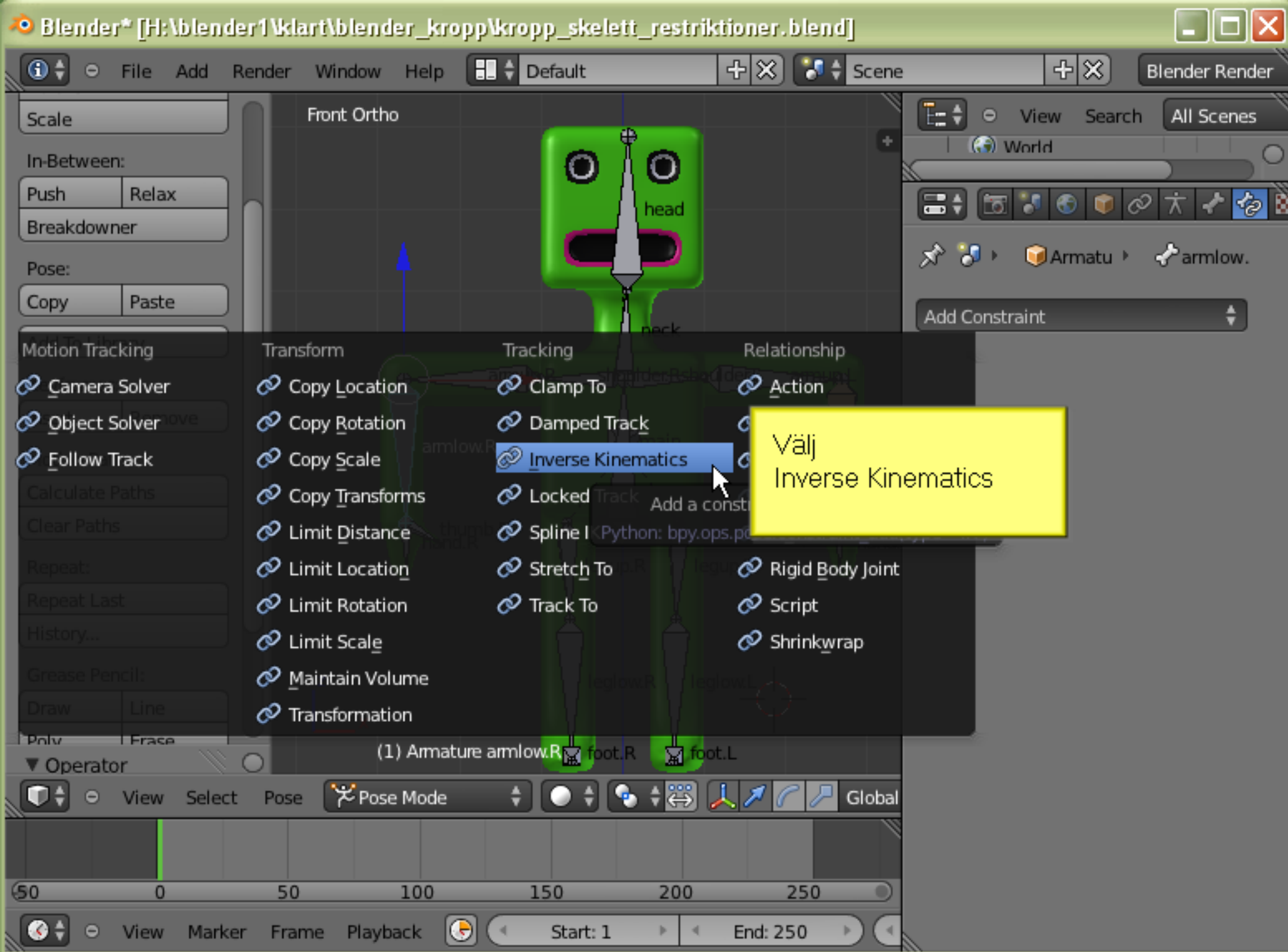
World

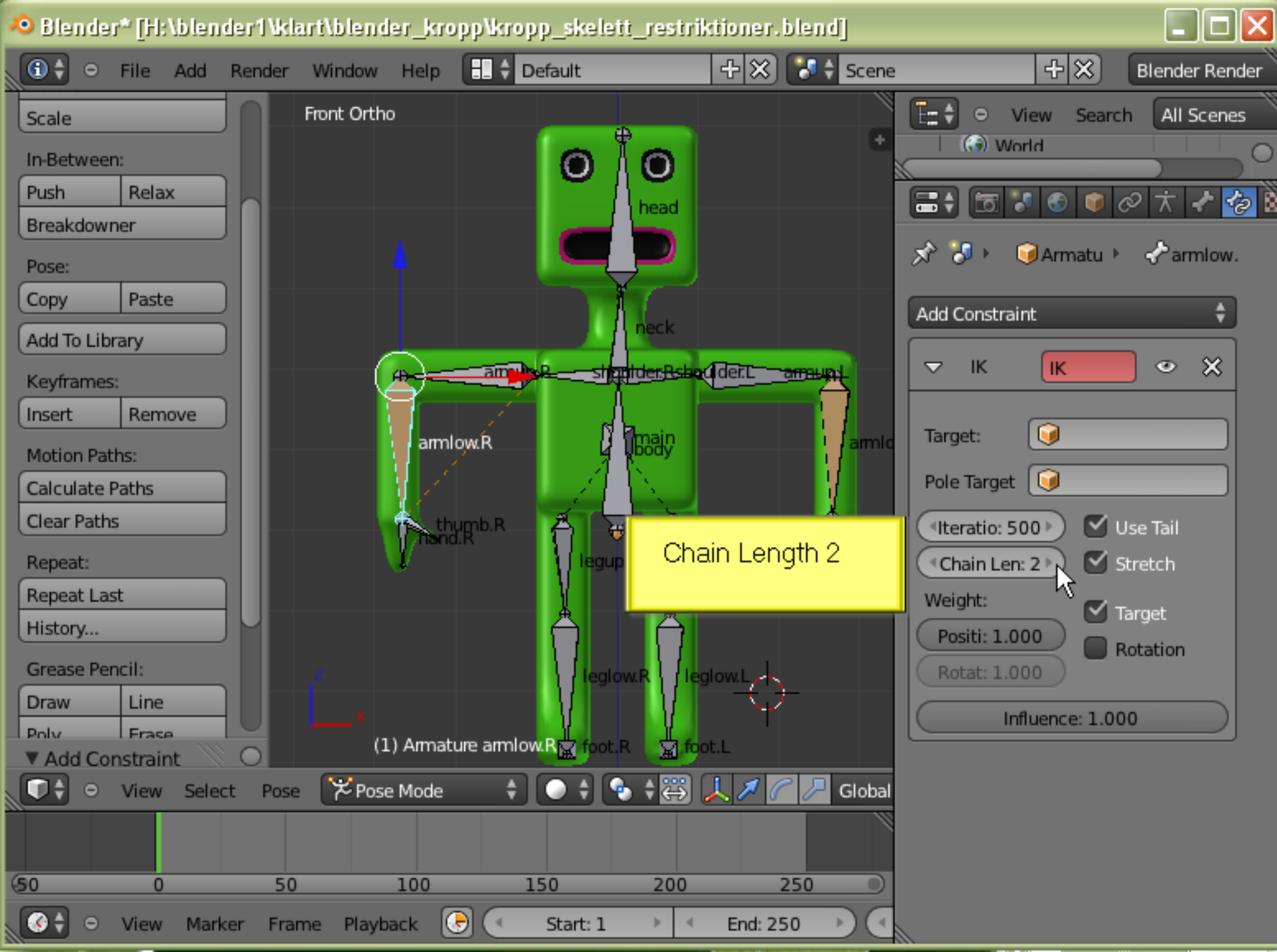
Armatur armlow

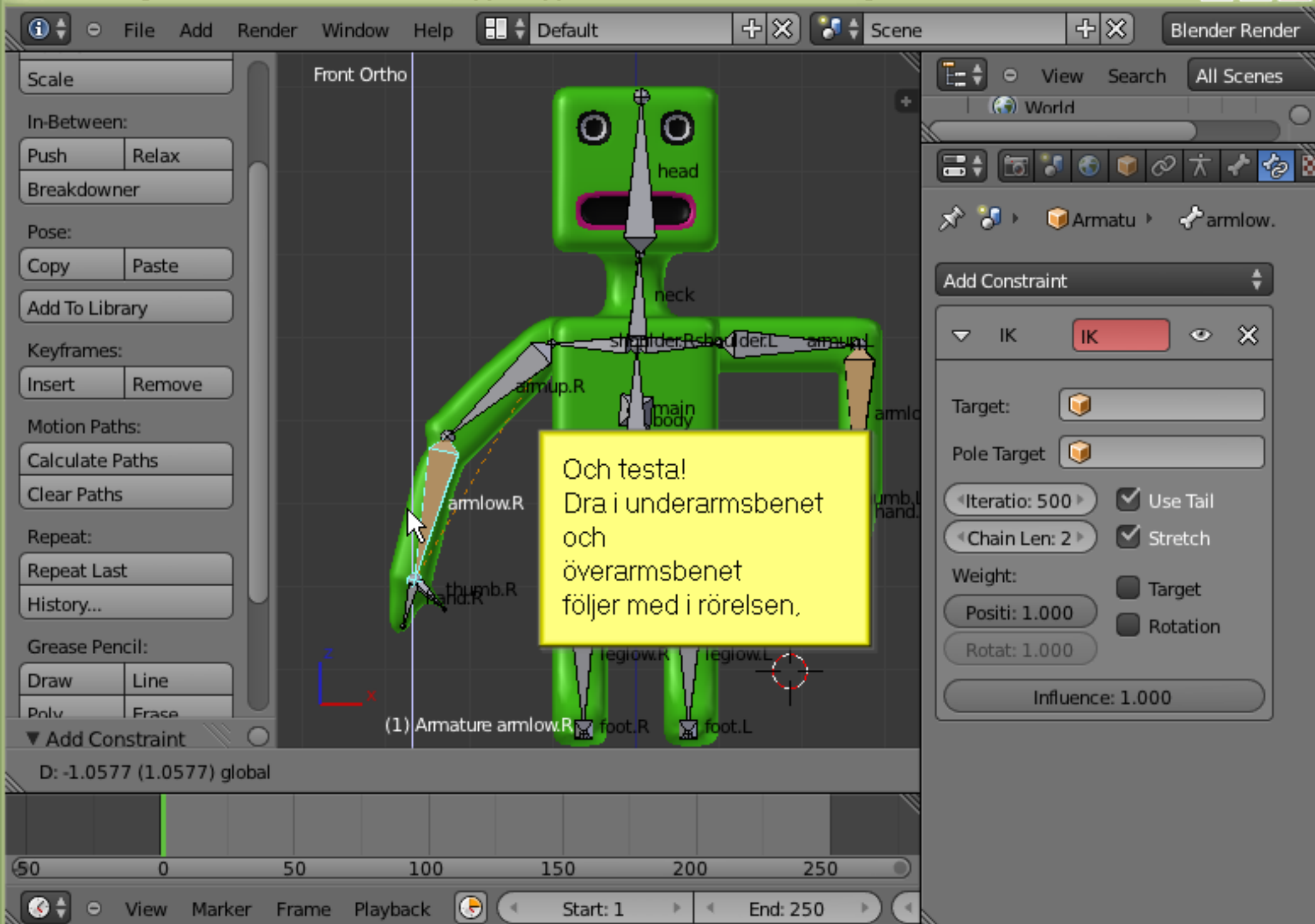
View Marker Frame Playback

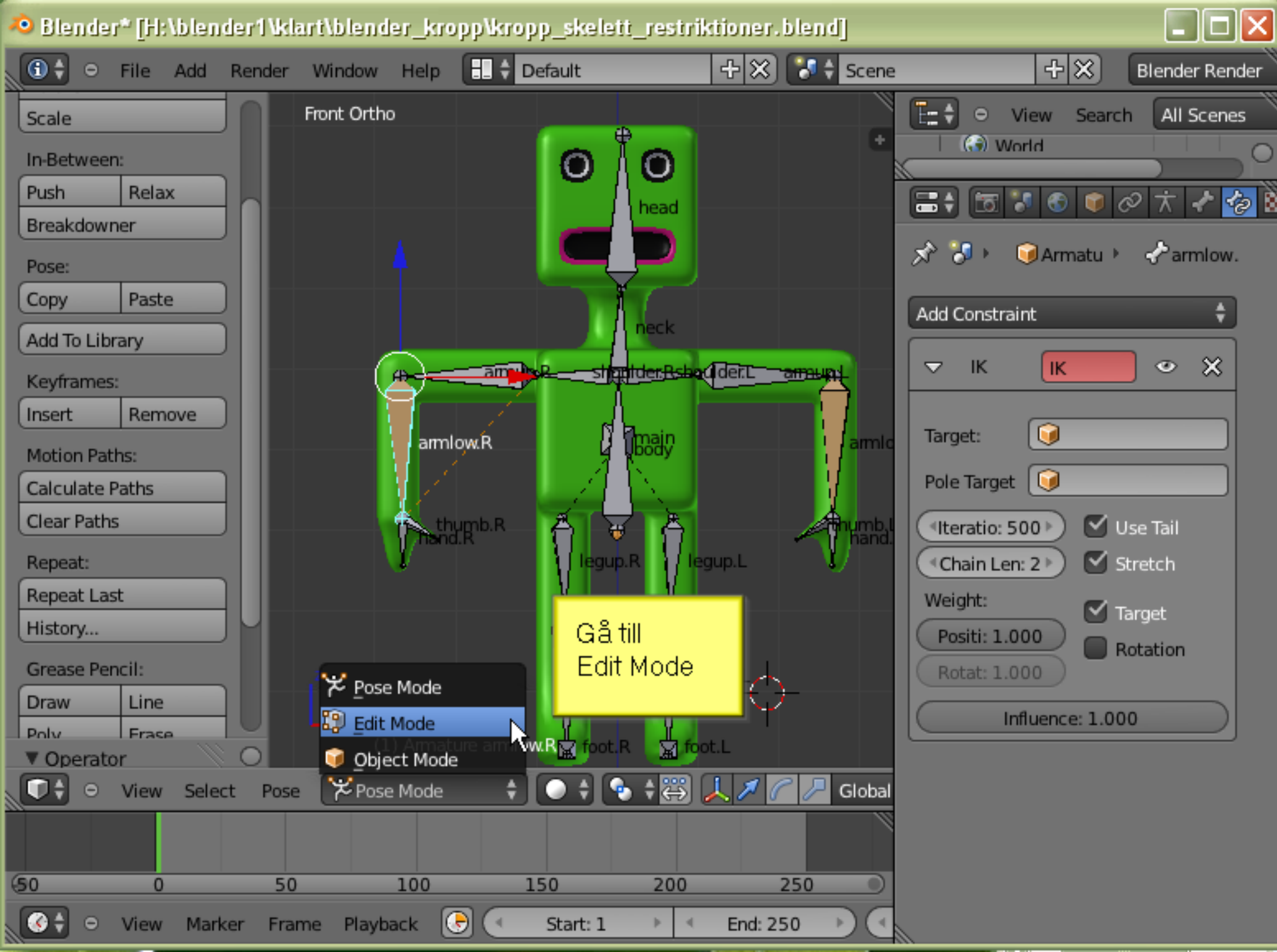
Start: 1 End: 250

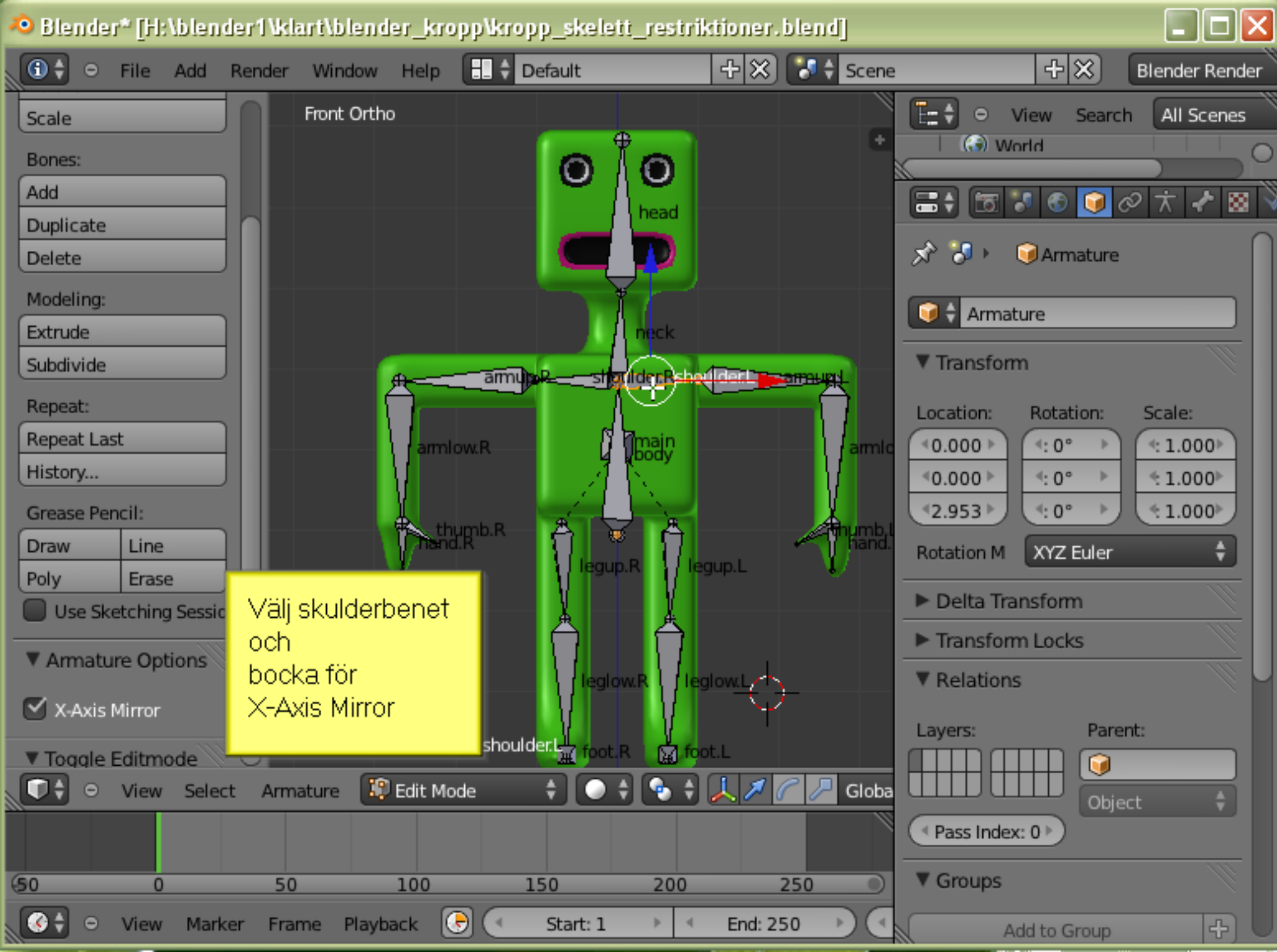


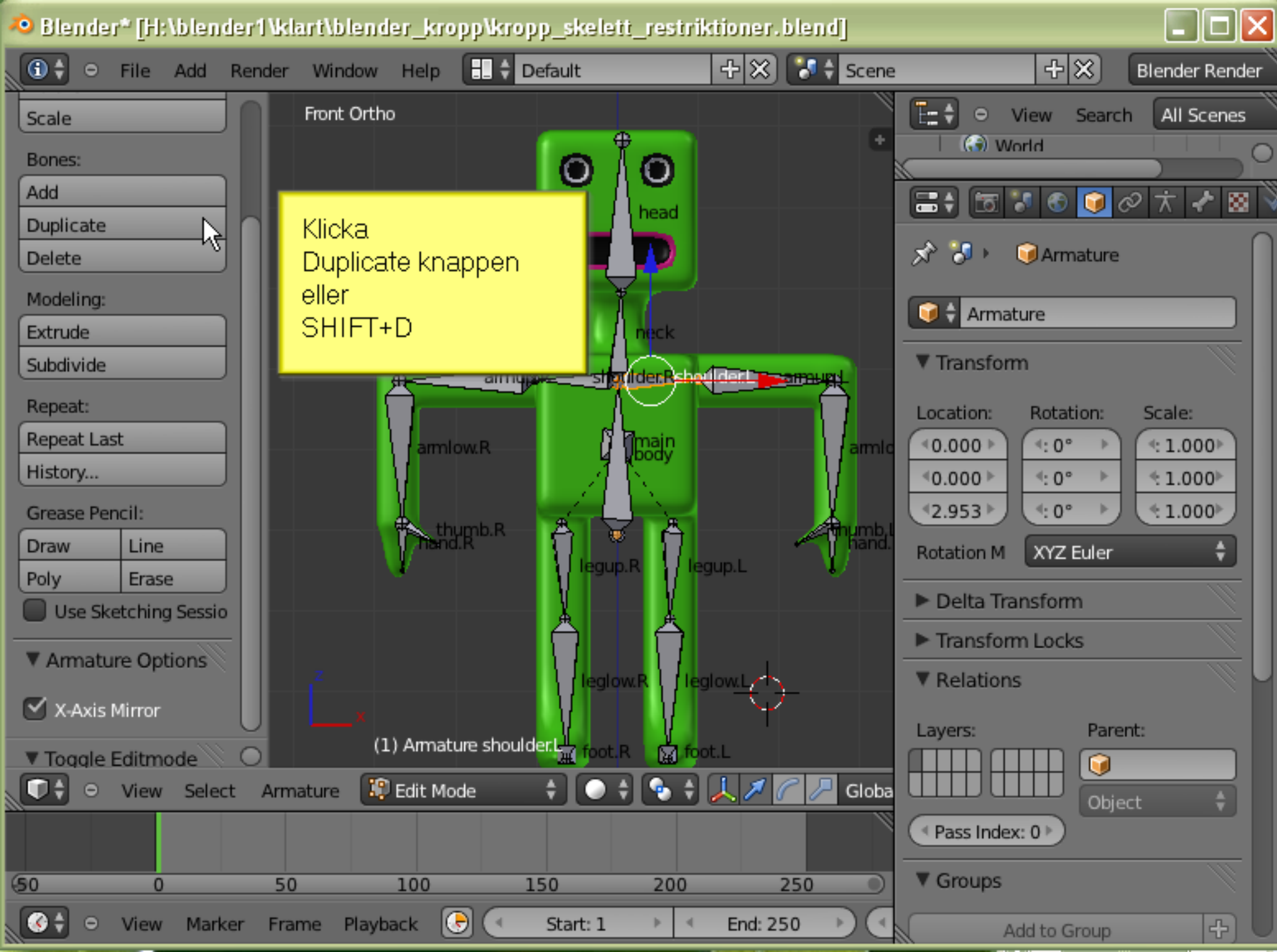


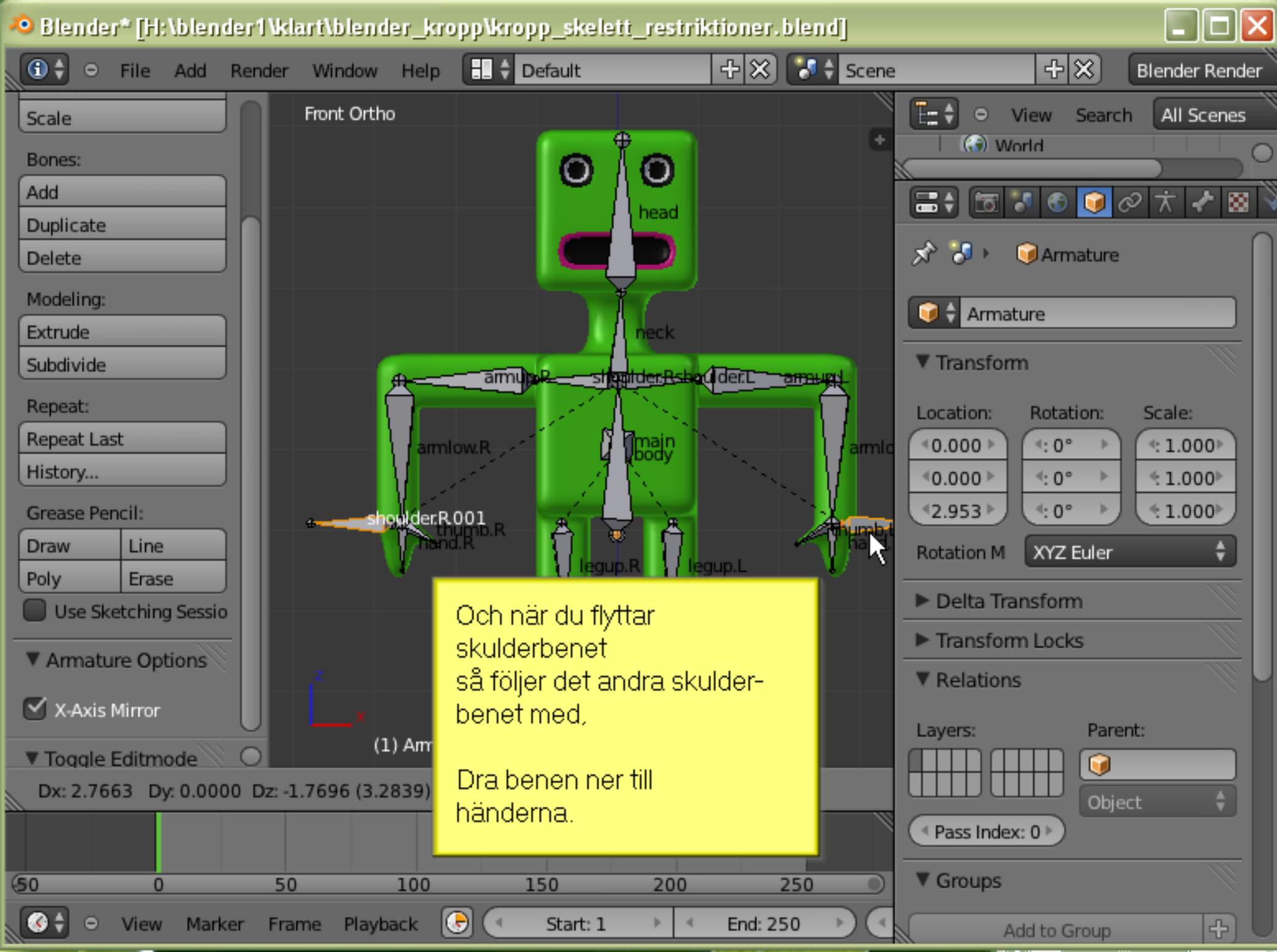


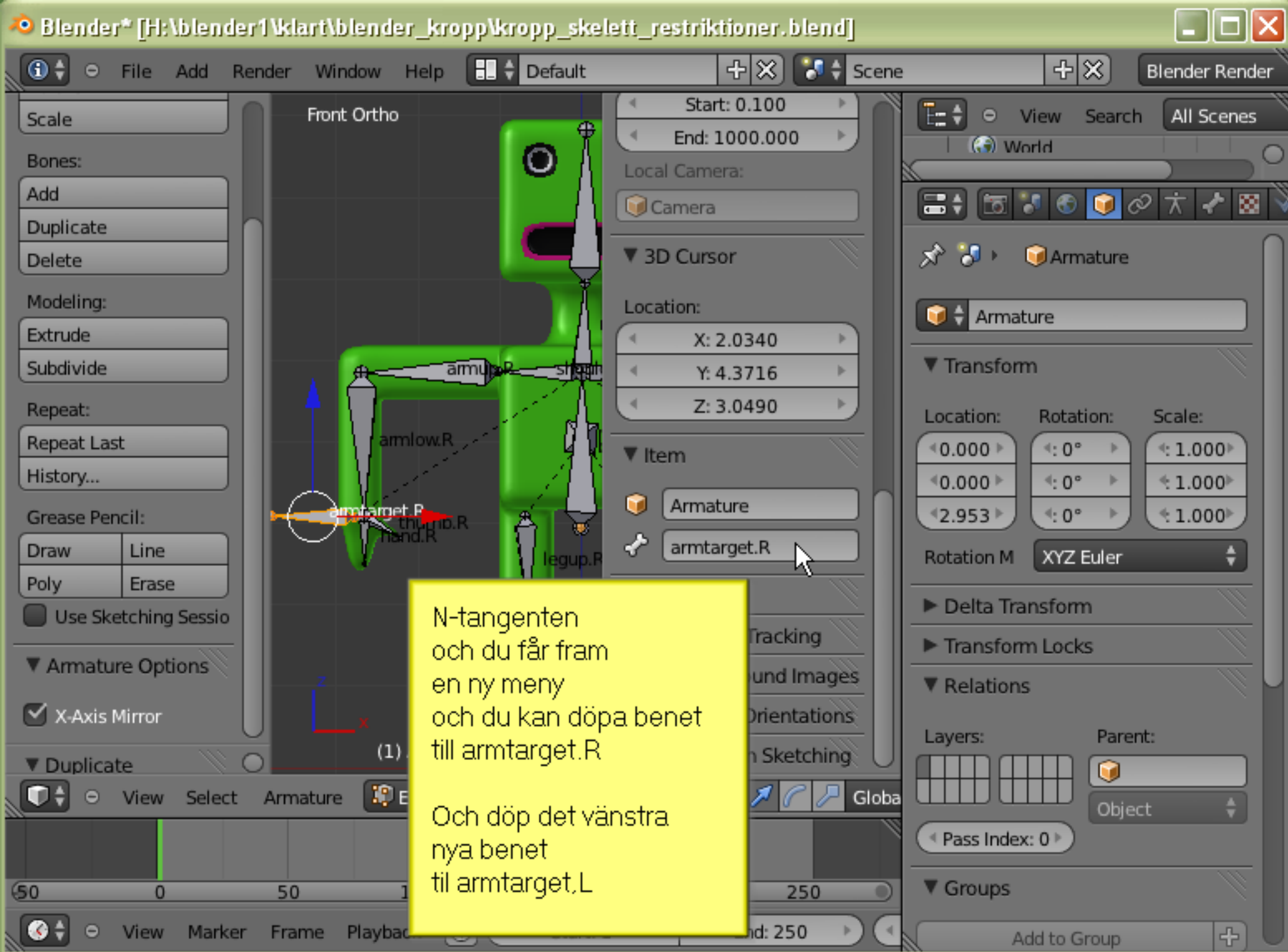


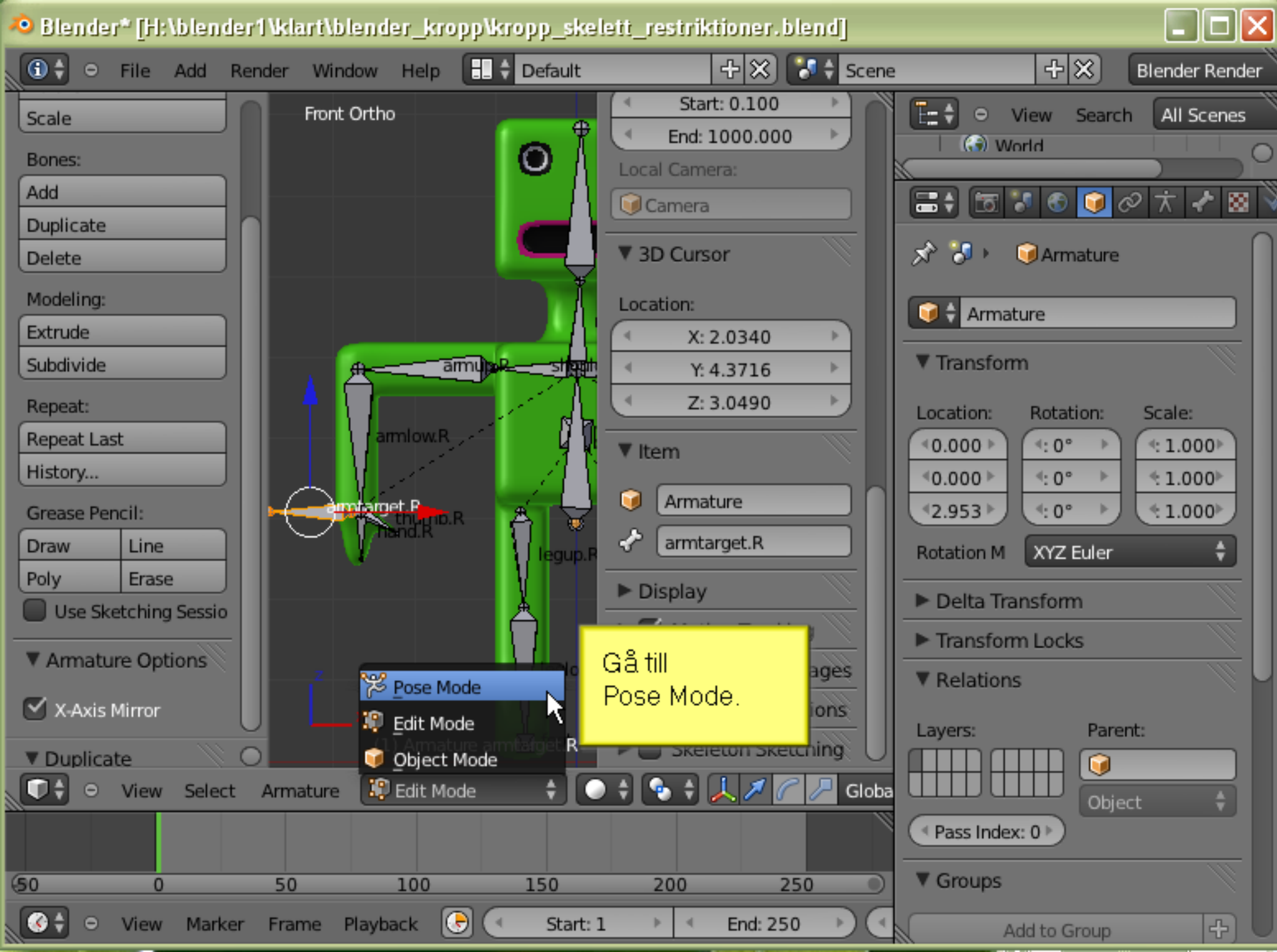








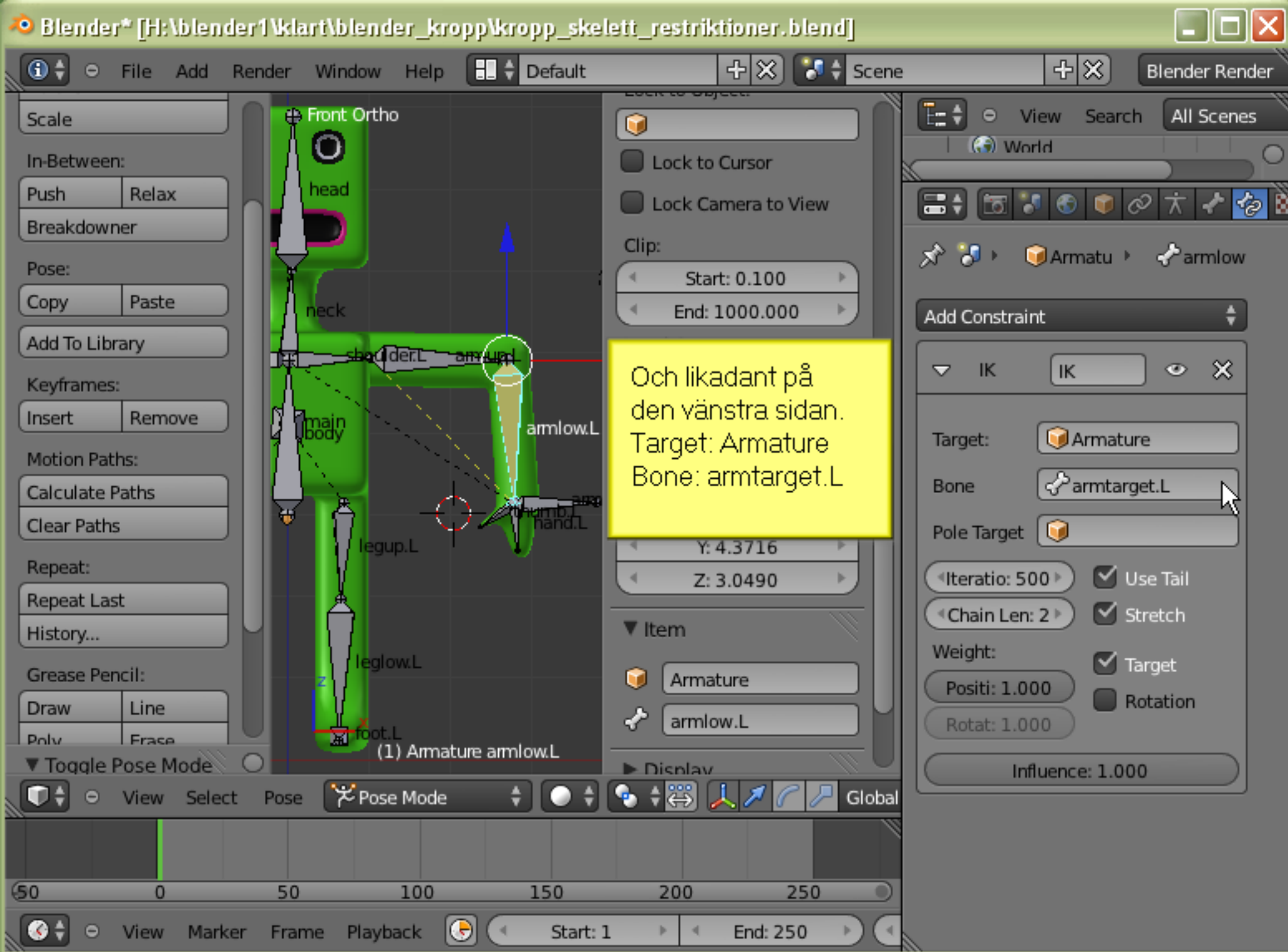


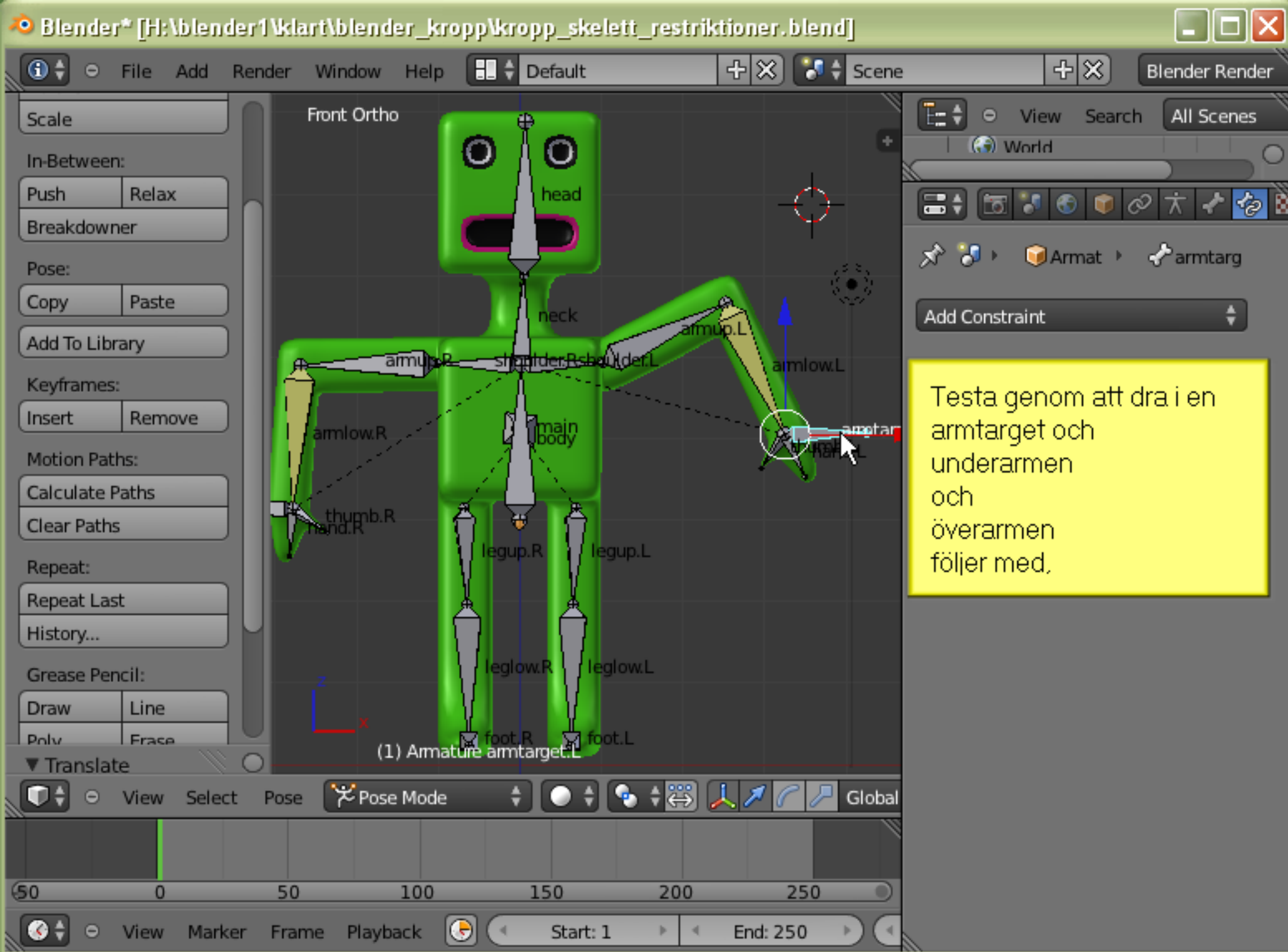


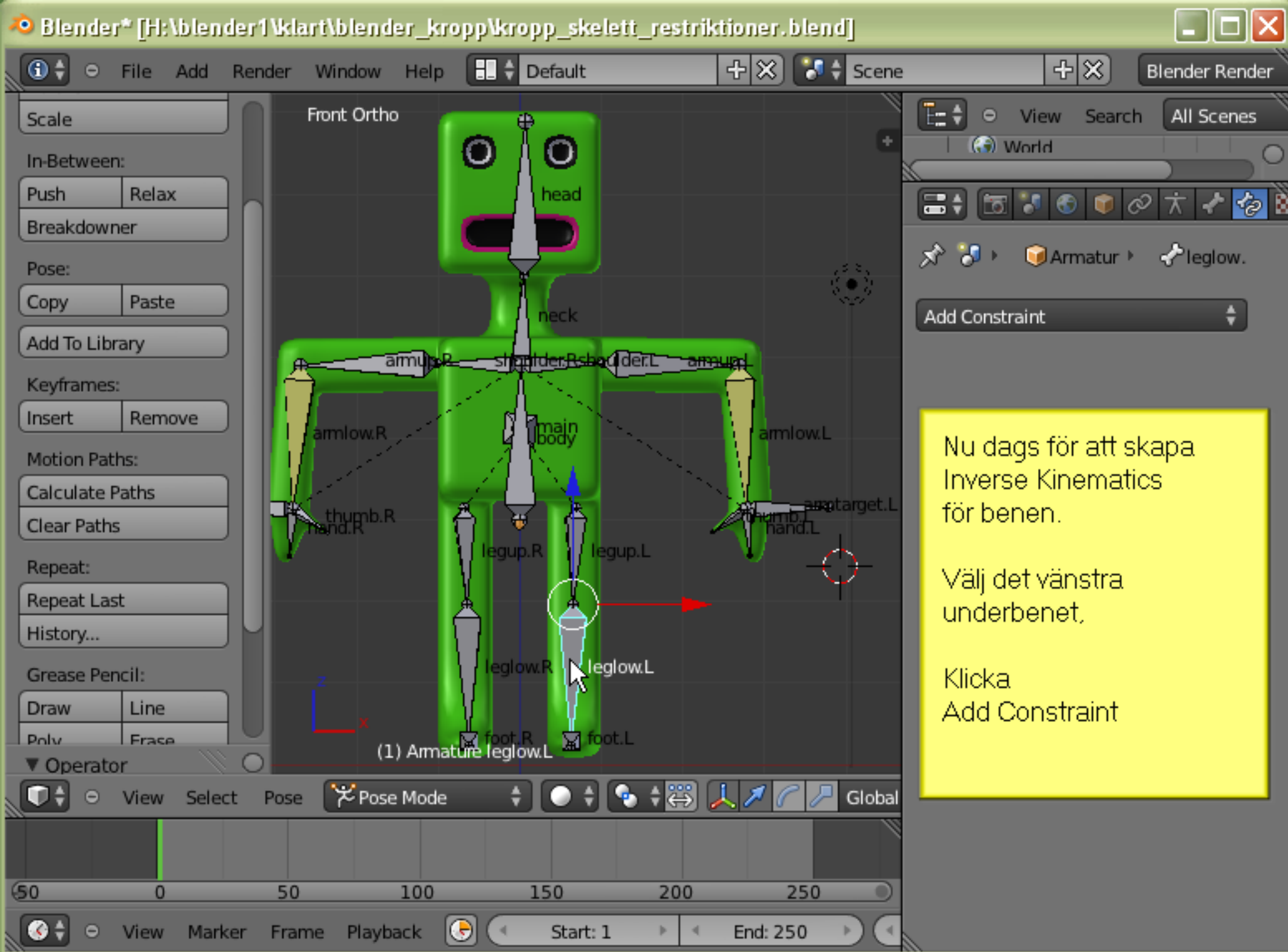
Global

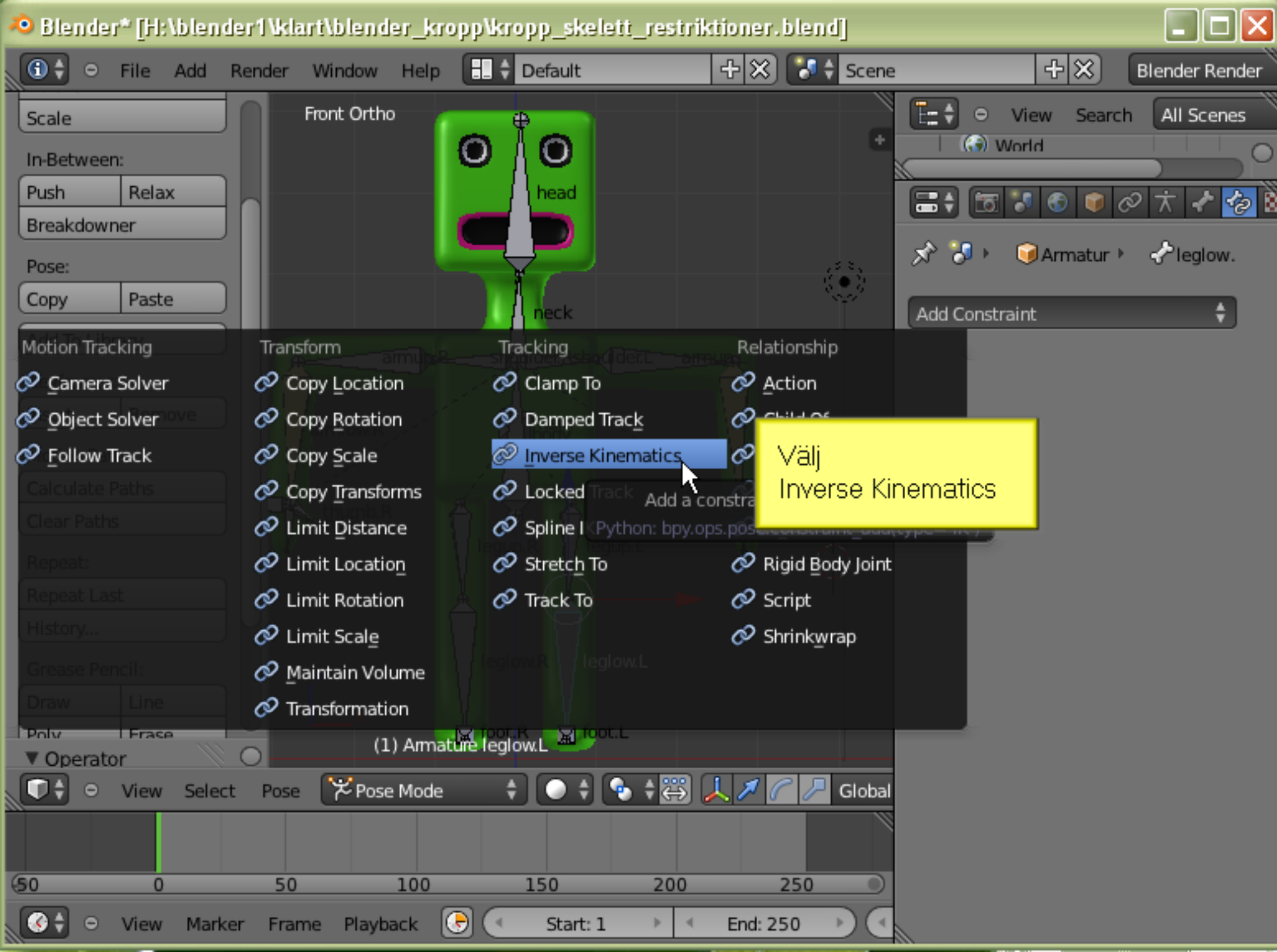
Influence: 1.000

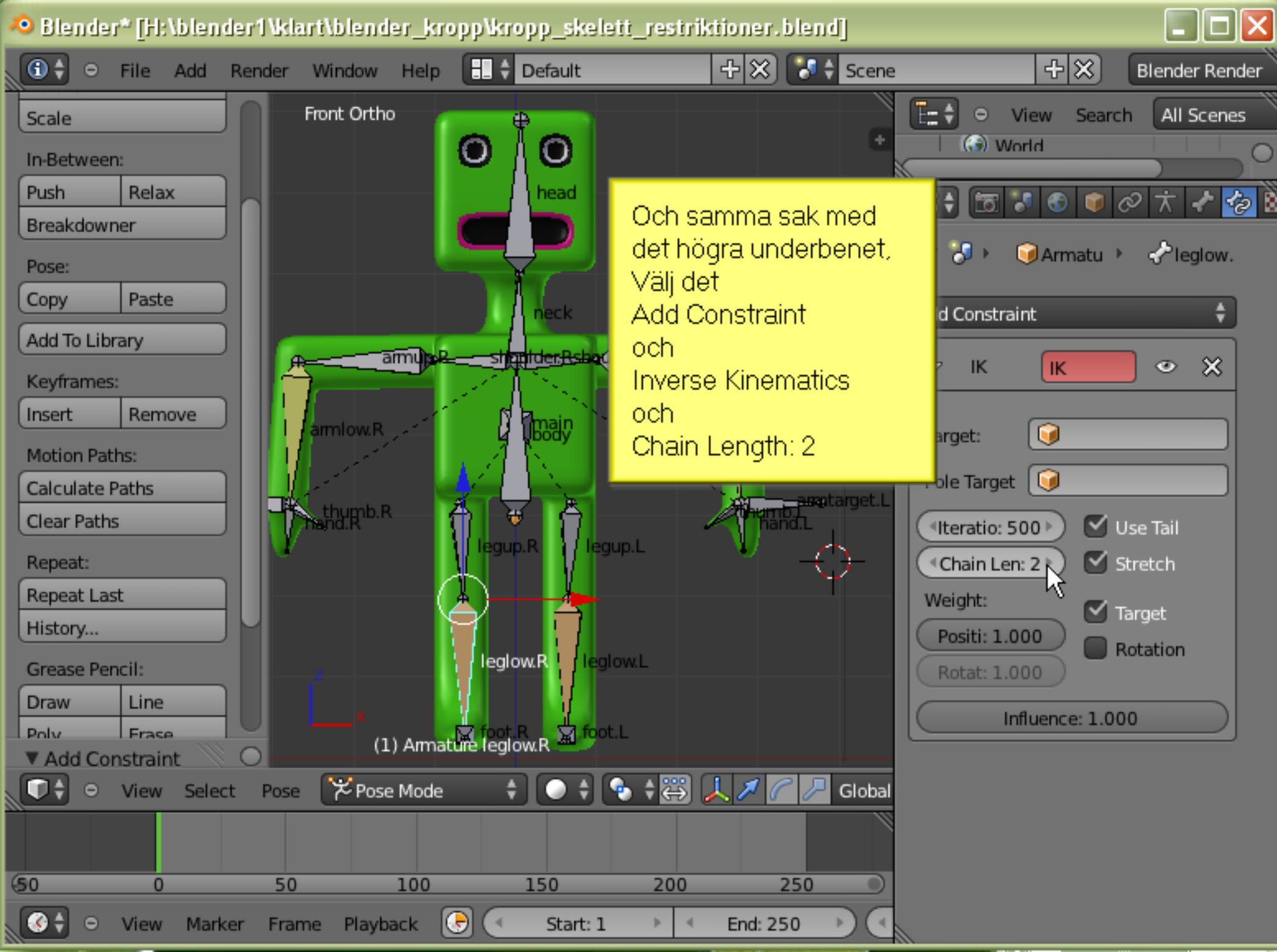
End: 250

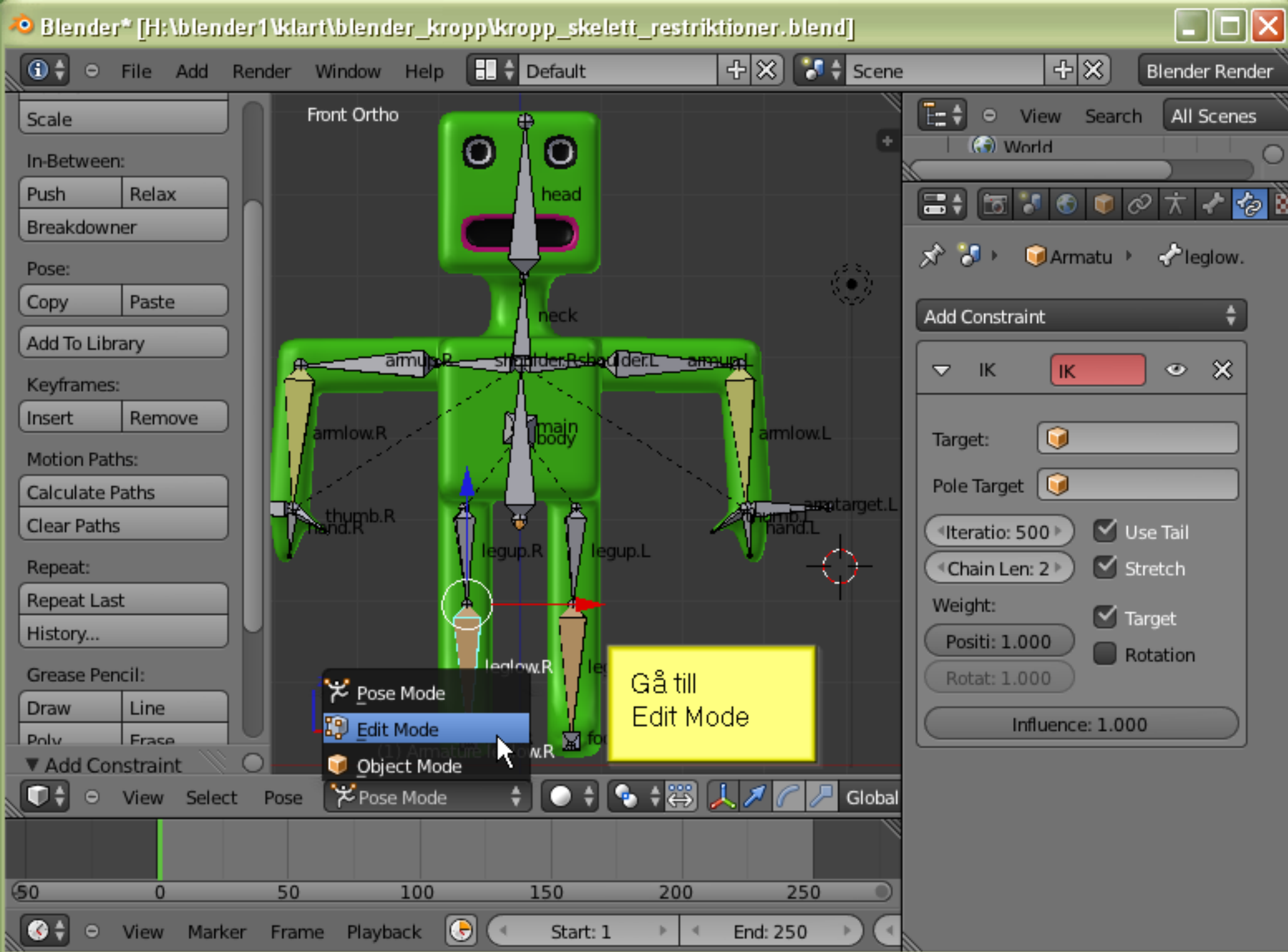


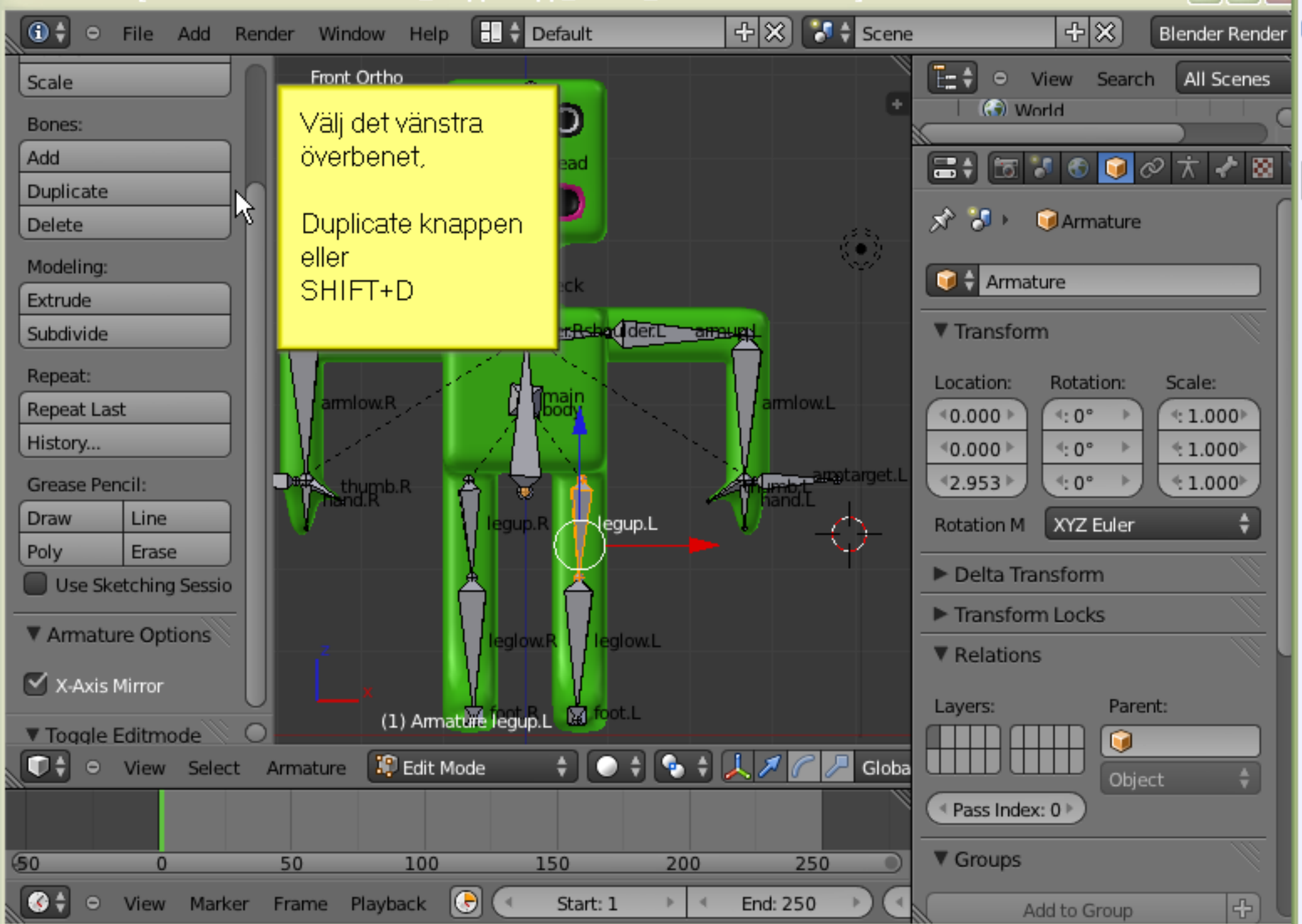


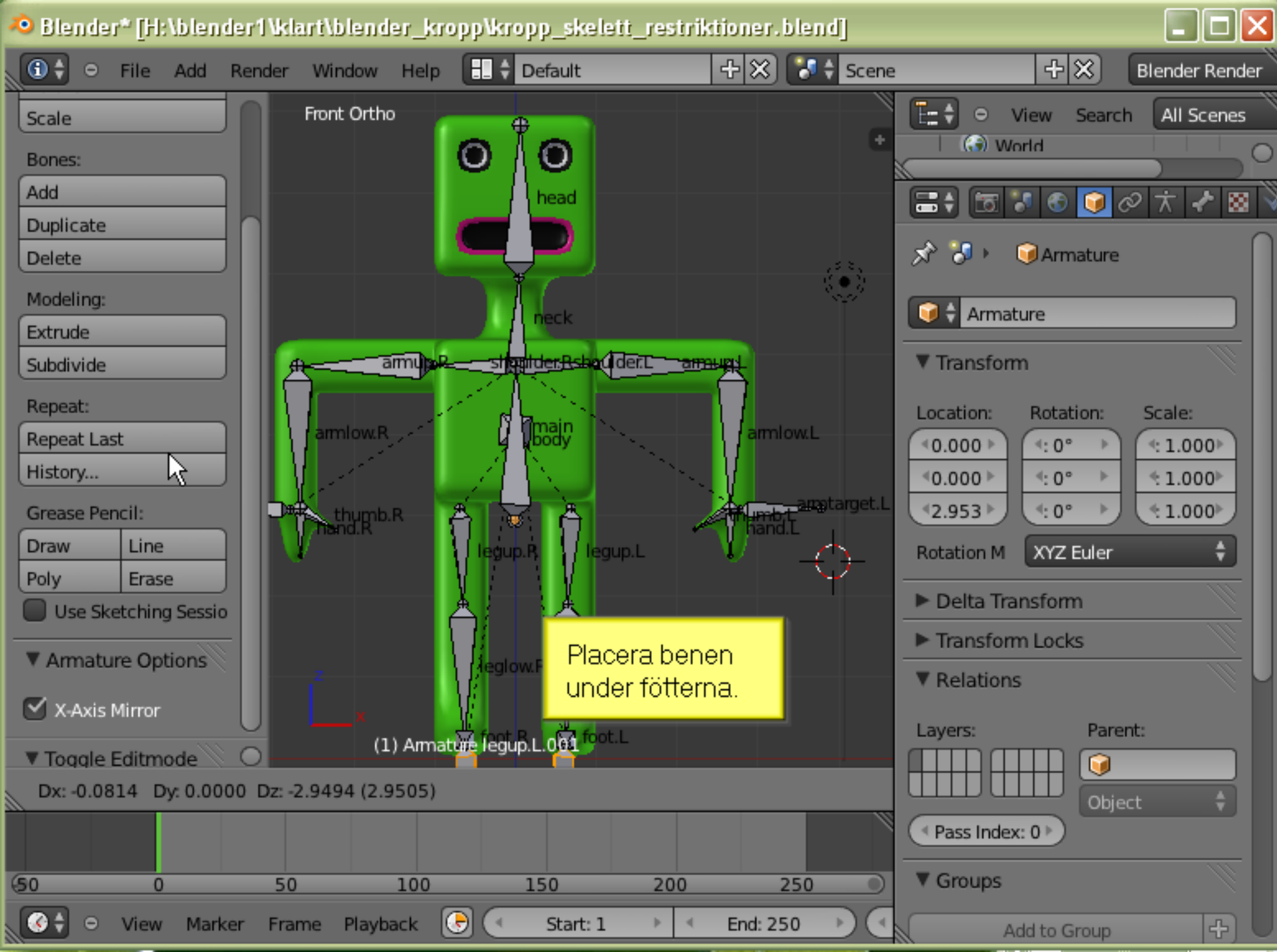


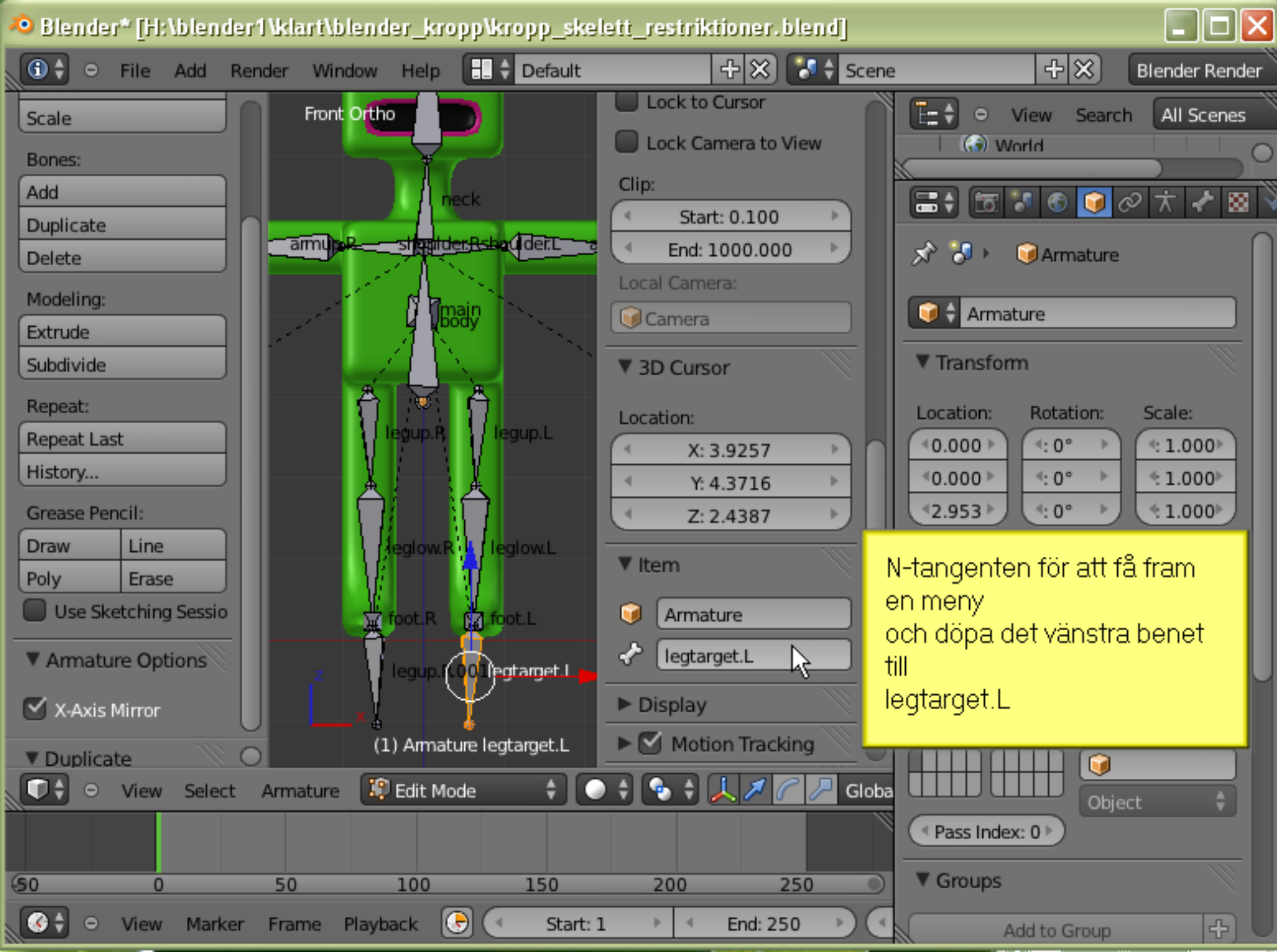


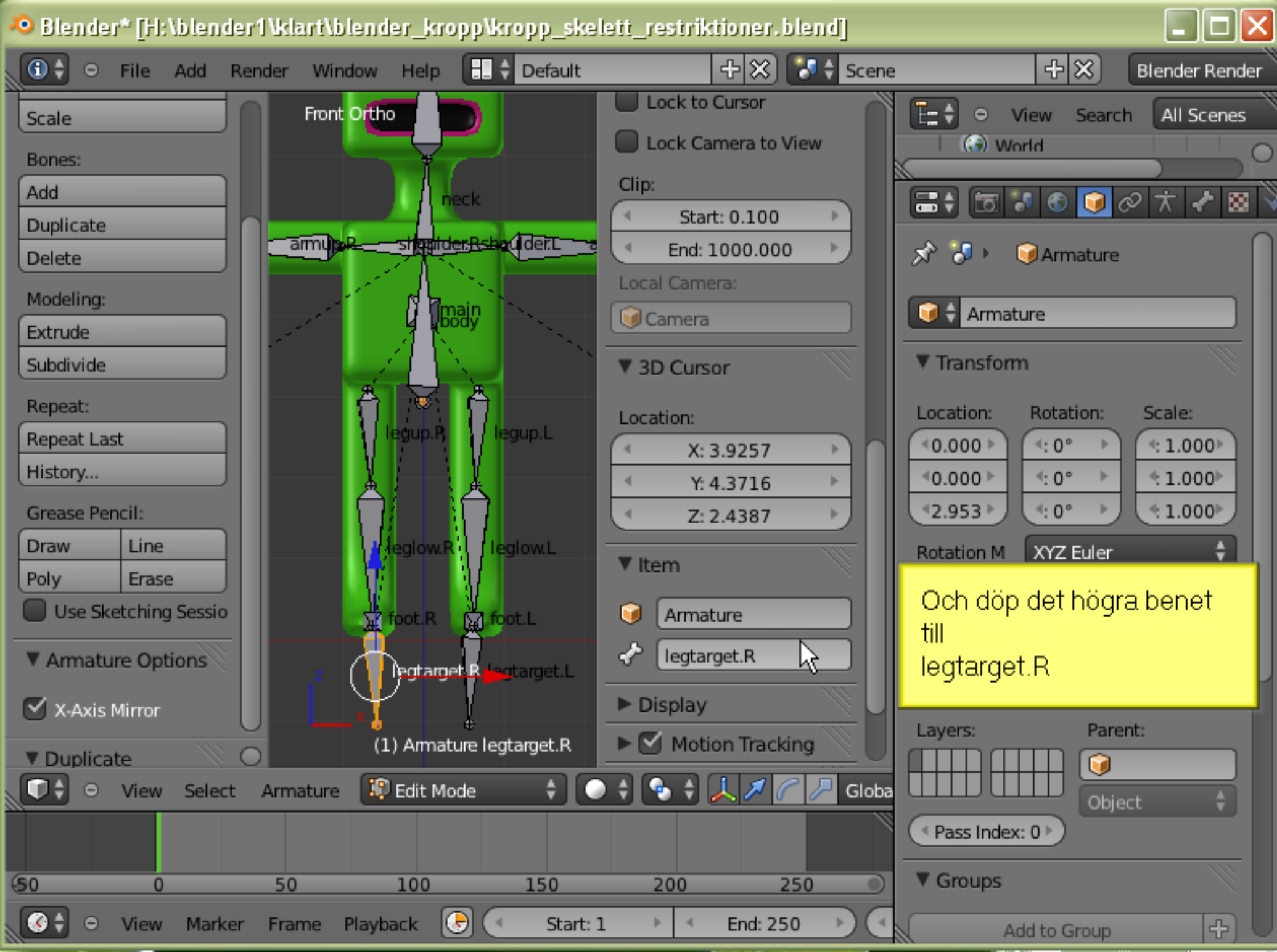


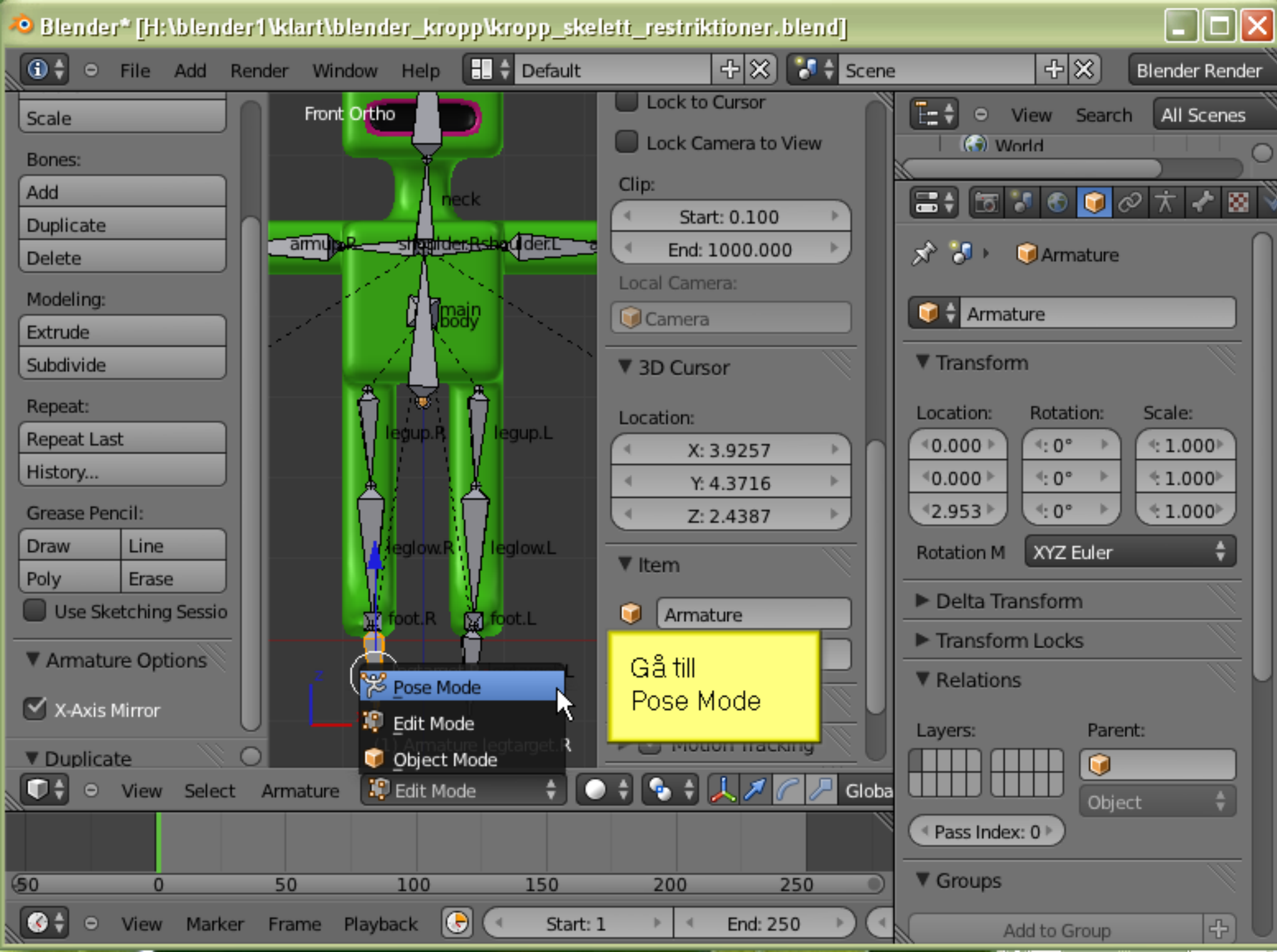


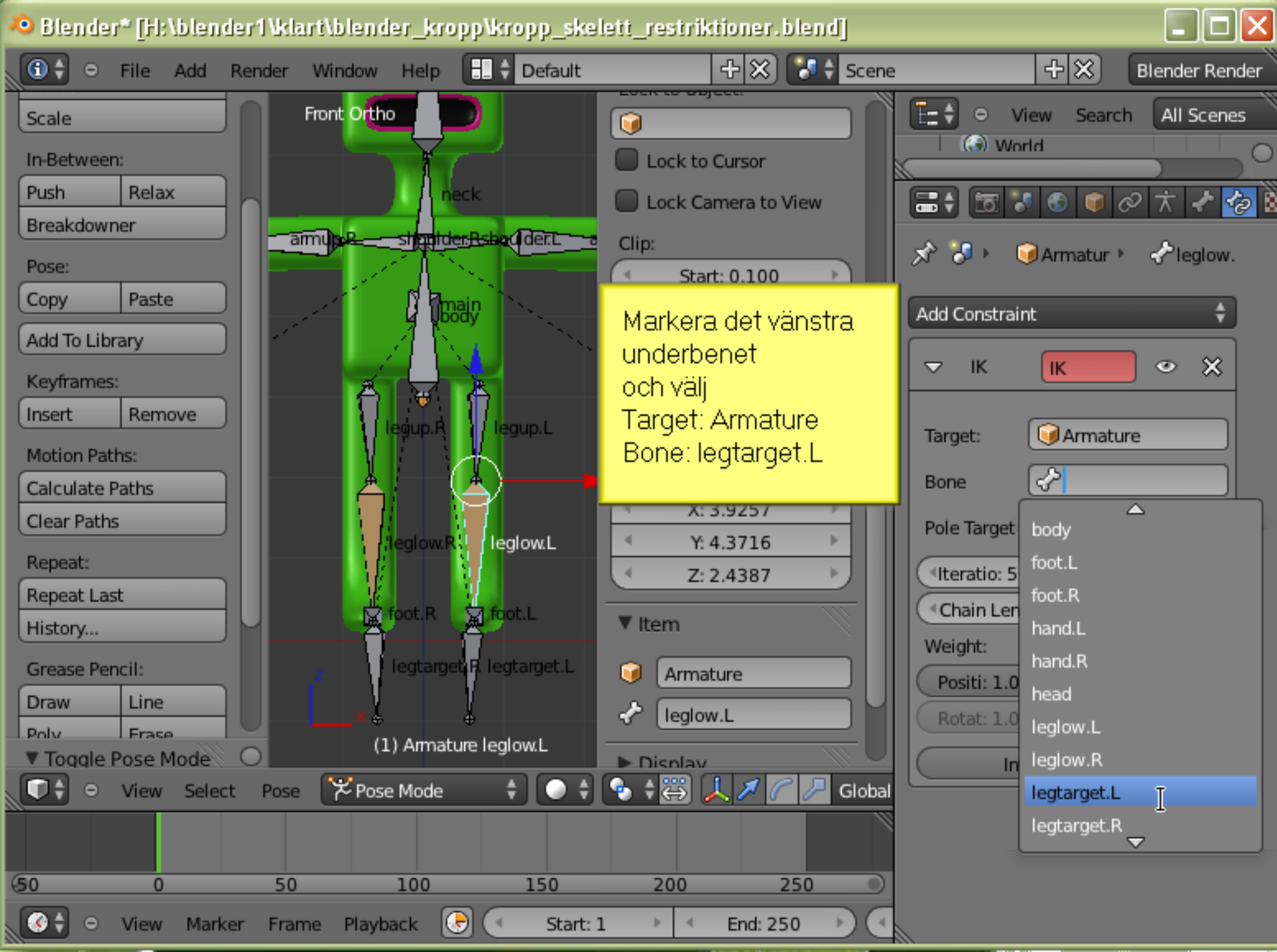


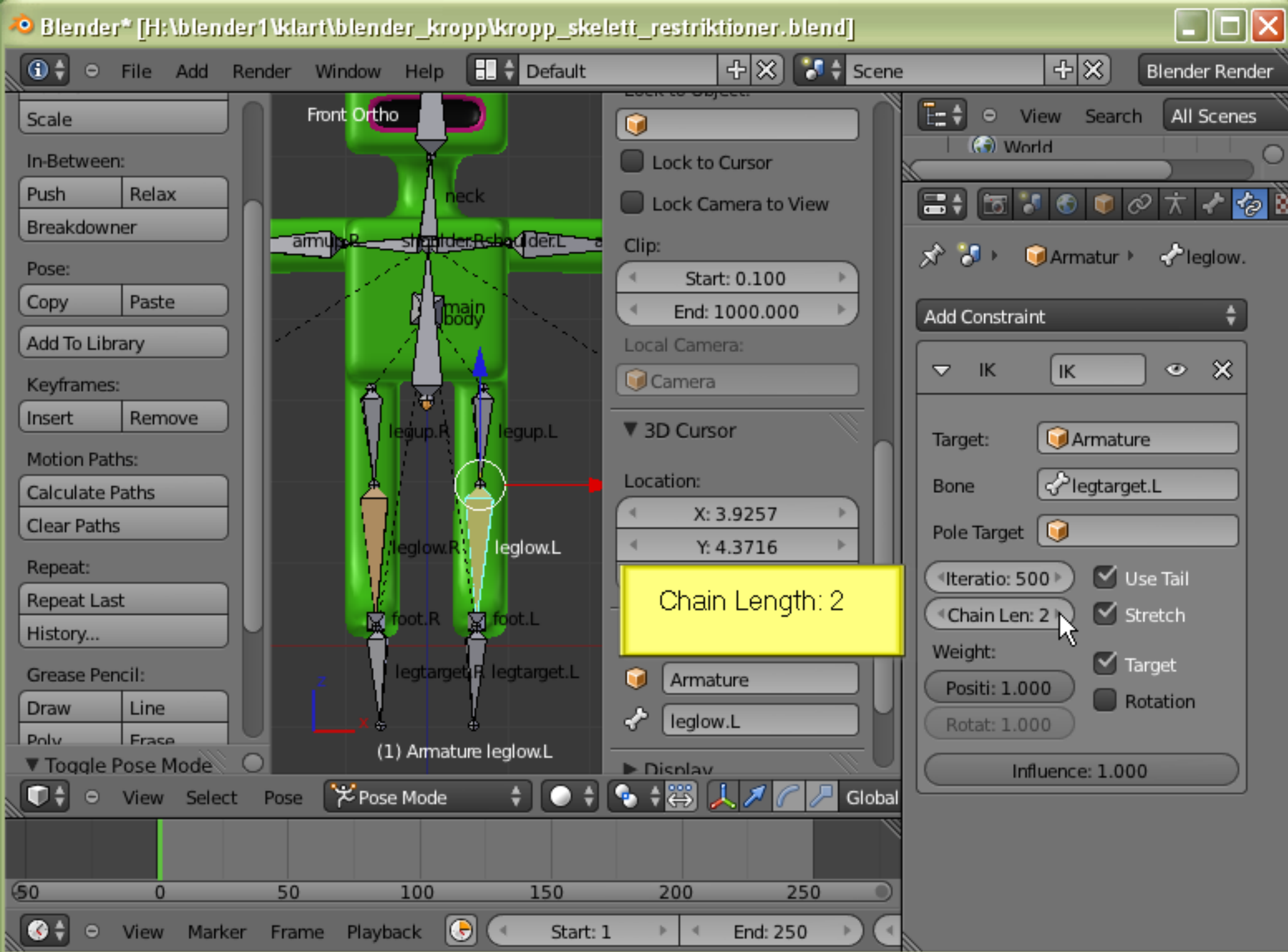


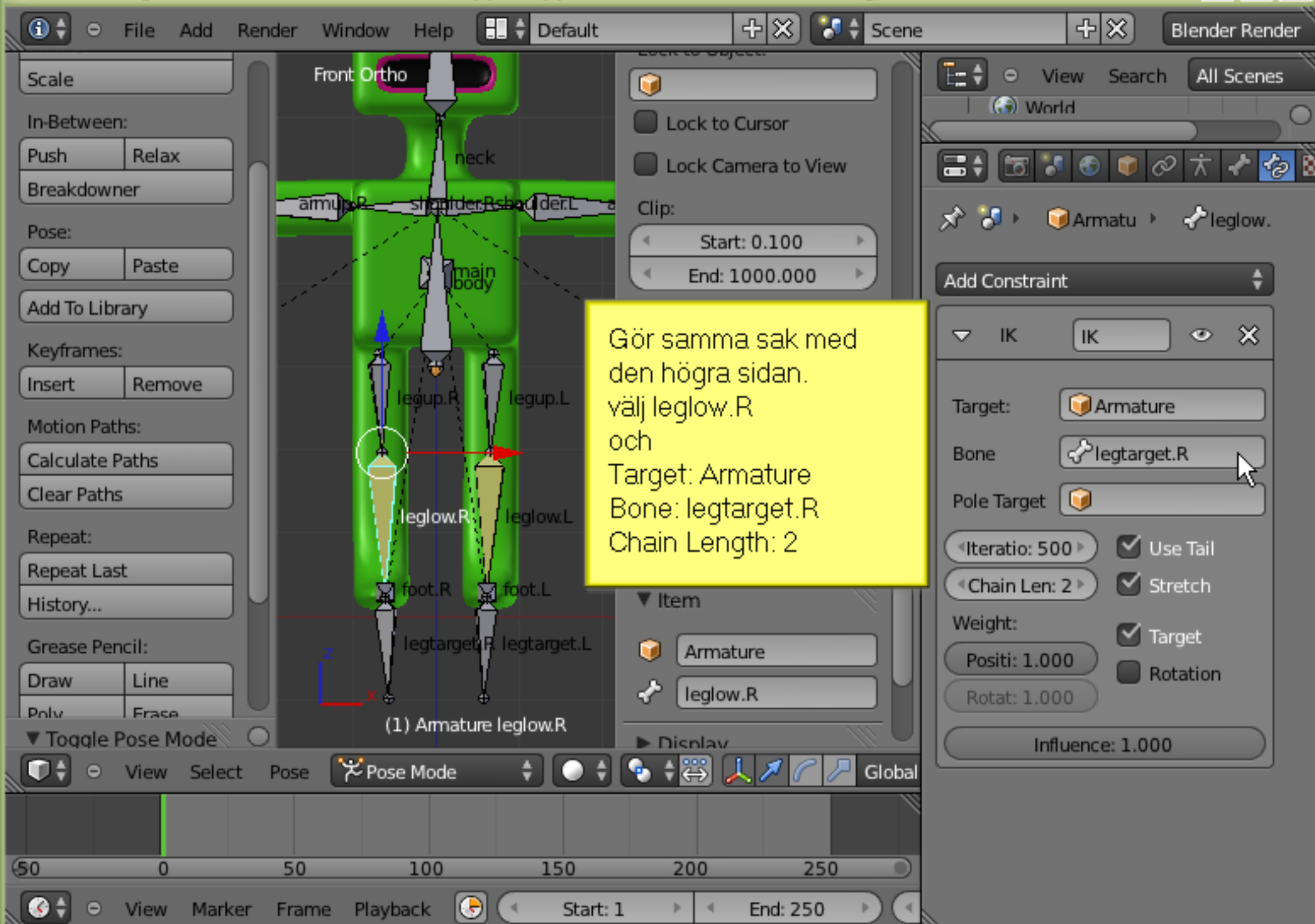












Front Ortho

Scale

In-Between:

Push Relax

Breakdowner

Pose:

Copy Paste

Add To Library

Keyframes:

Insert Remove

Motion Paths:

Calculate Paths

Clear Paths

Repeat:

Repeat Last

History...

Grease Pencil:

Draw Line

Polv Frase

▼ Toggle Pose Mode

View Select Pose Pose Mode

View Marker Frame Playback

Start: 1 End: 250

neck

armup.R shoulder.R shoulder.L

main body

legup.R legup.L

leglow.R leglow.L

foot.R foot.L

legtarget.R legtarget.L

(1) Armature leglow.R

Lock to Object:

Lock to Cursor

Lock Camera to View

Clip:

Start: 0.100

End: 1000.000

Item

Armature

leglow.R

Display

View Search All Scenes

World

Armature leglow.

Add Constraint

IK IK

Target: Armature

Bone: legtarget.R

Pole Target

Iteration: 500 Use Tail

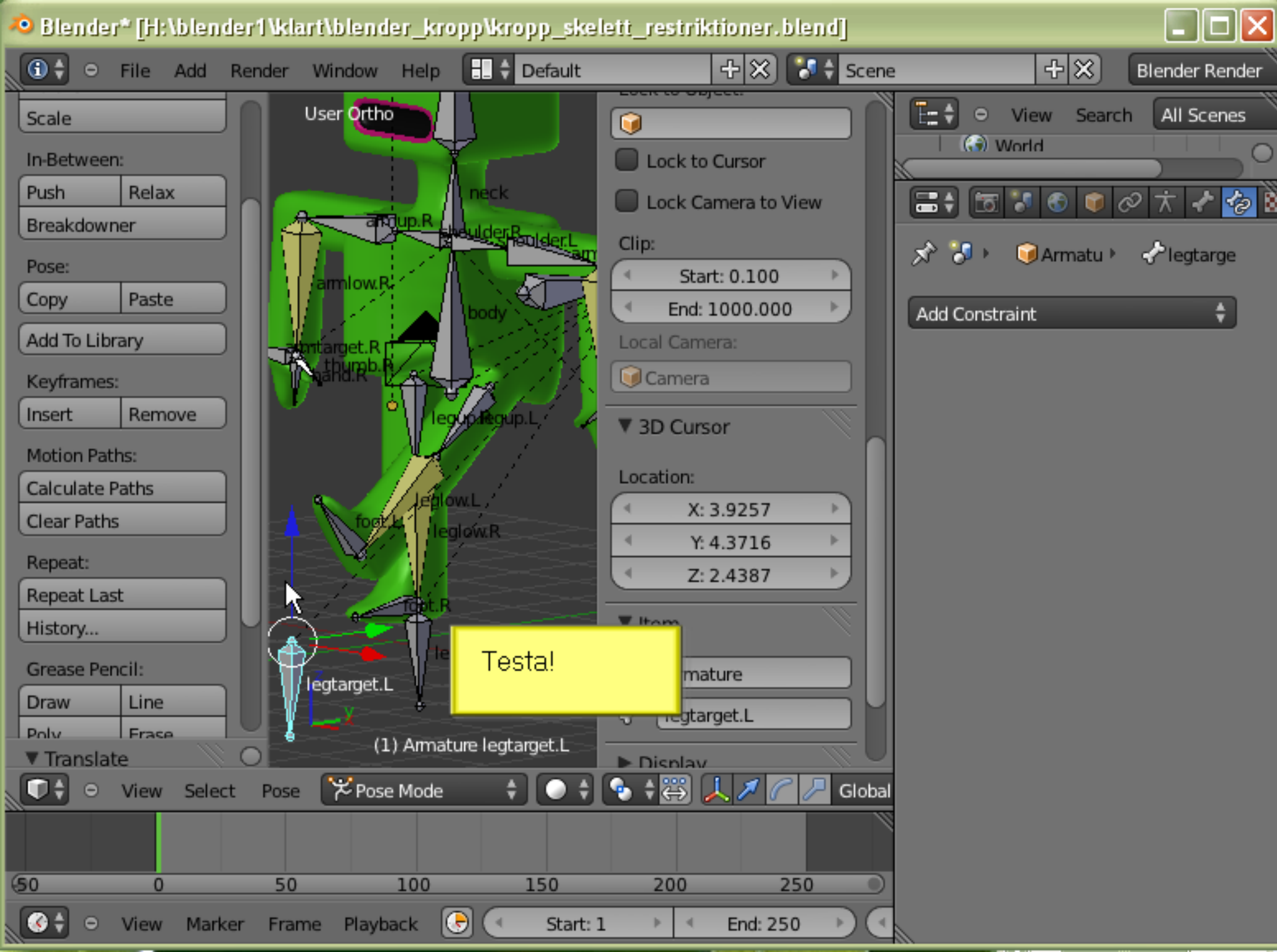
Chain Len: 2 Stretch

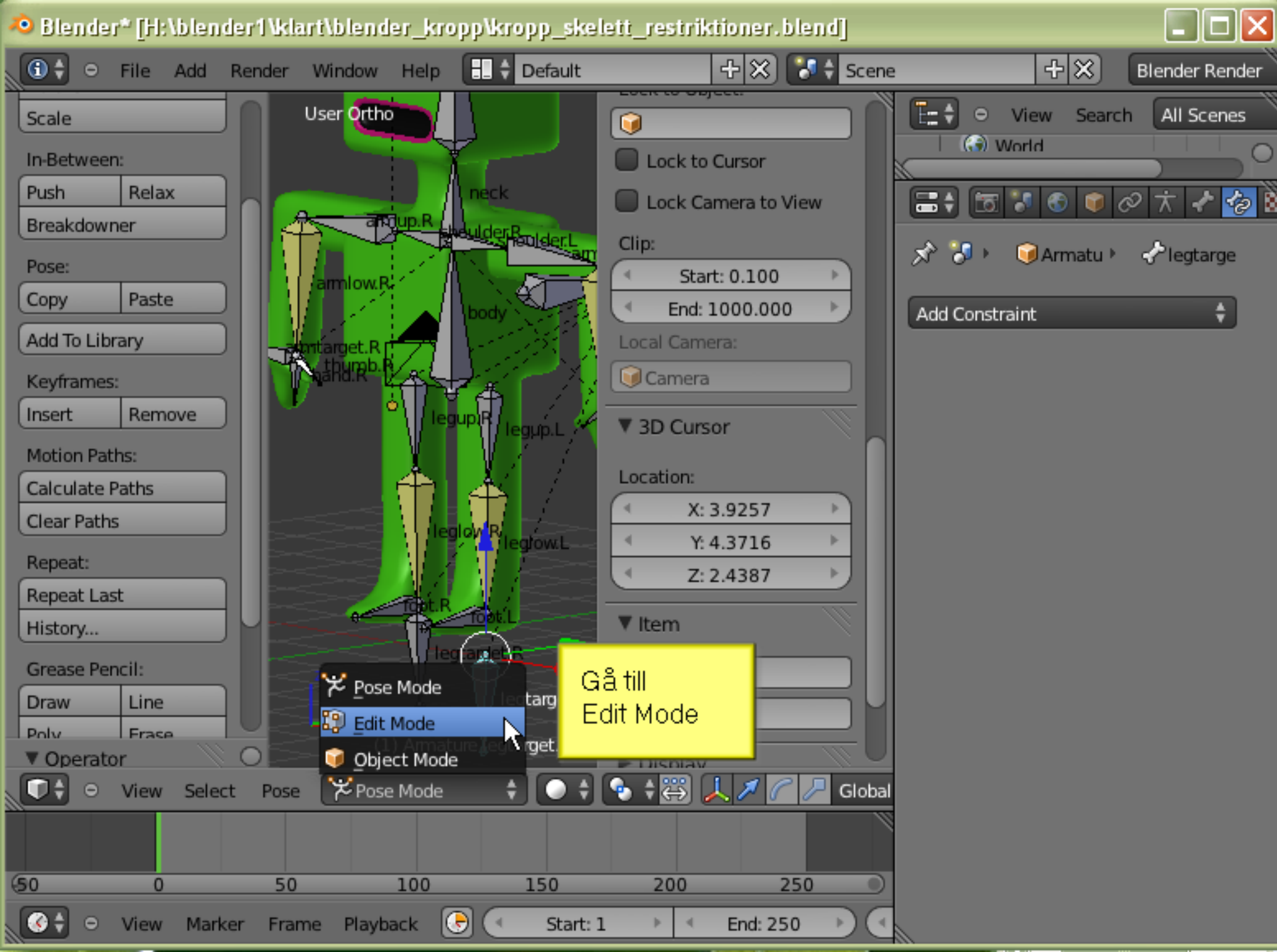
Weight: Positi: 1.000 Target

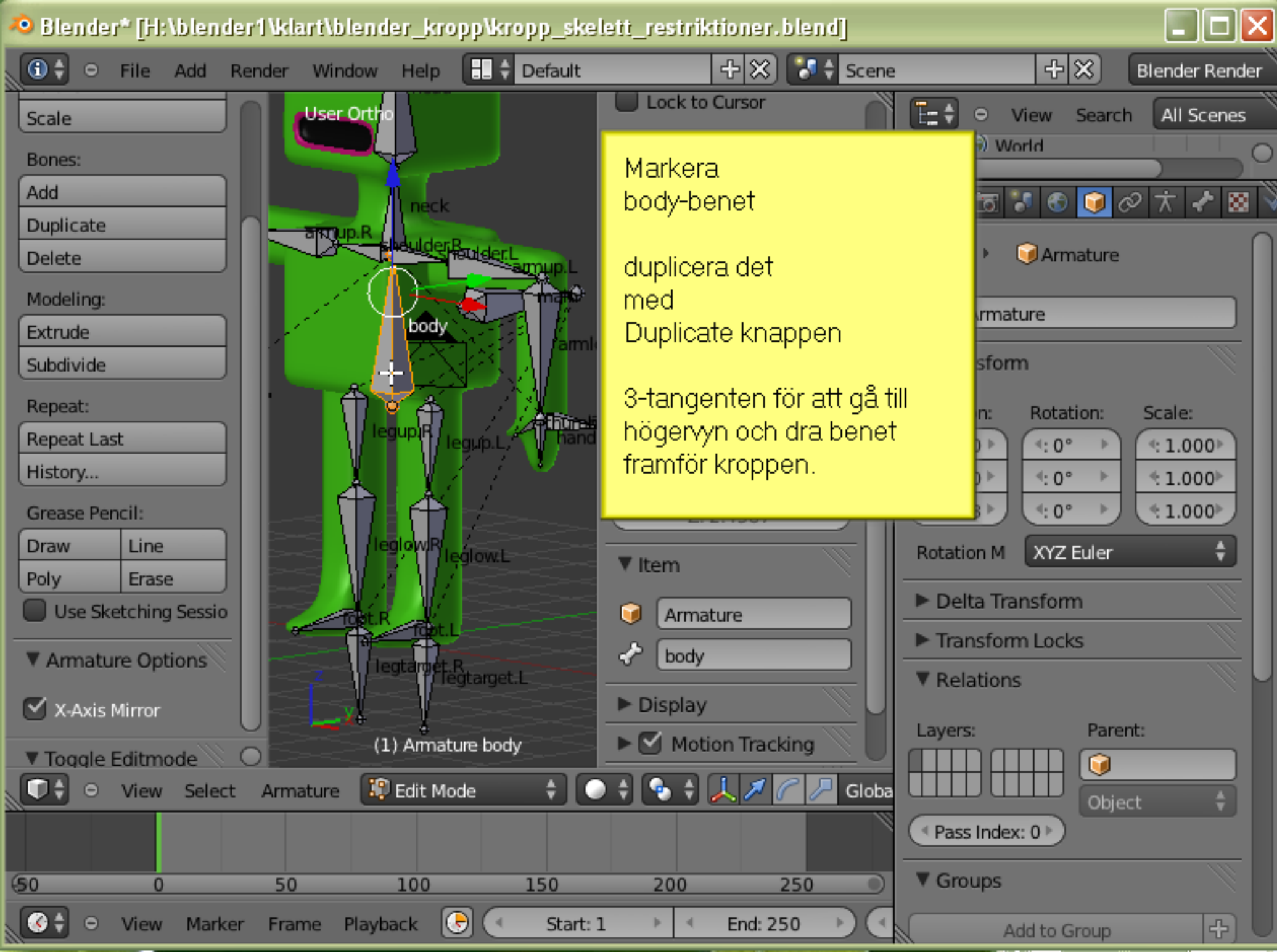
Rotat: 1.000 Rotation

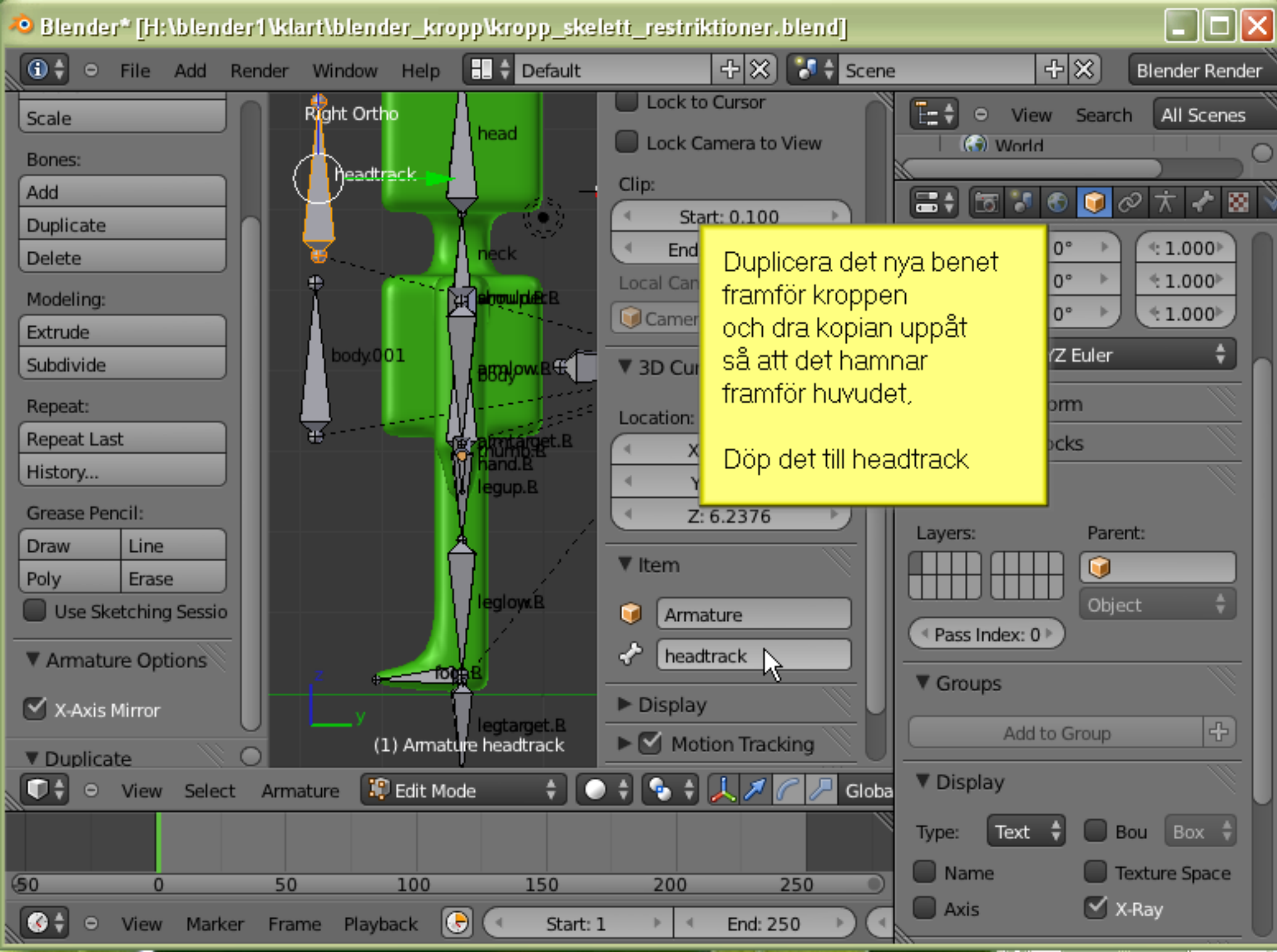
Influence: 1.000

Gör samma sak med den högra sidan. välj leglow.R och Target: Armature Bone: legtarget.R Chain Length: 2



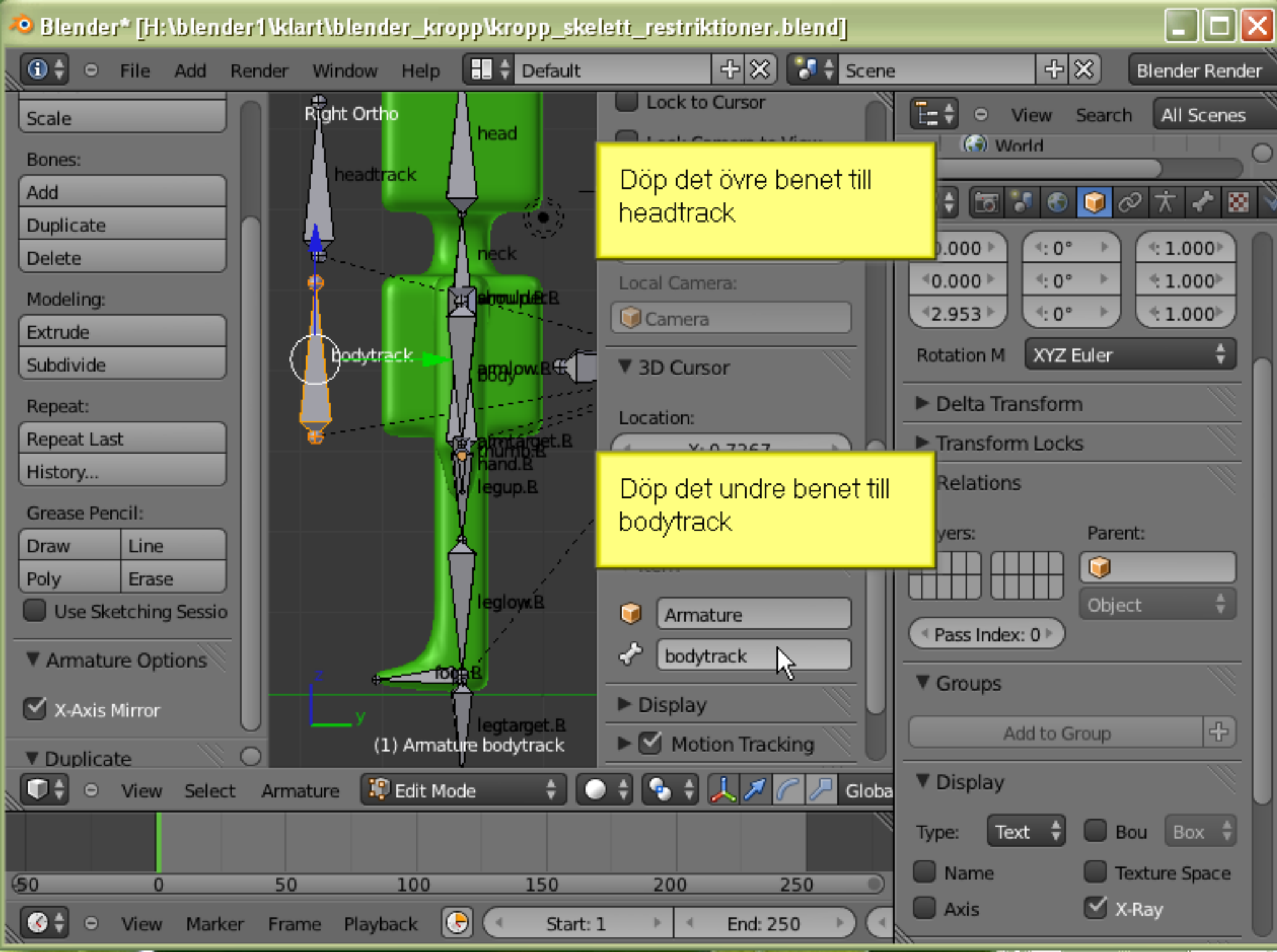


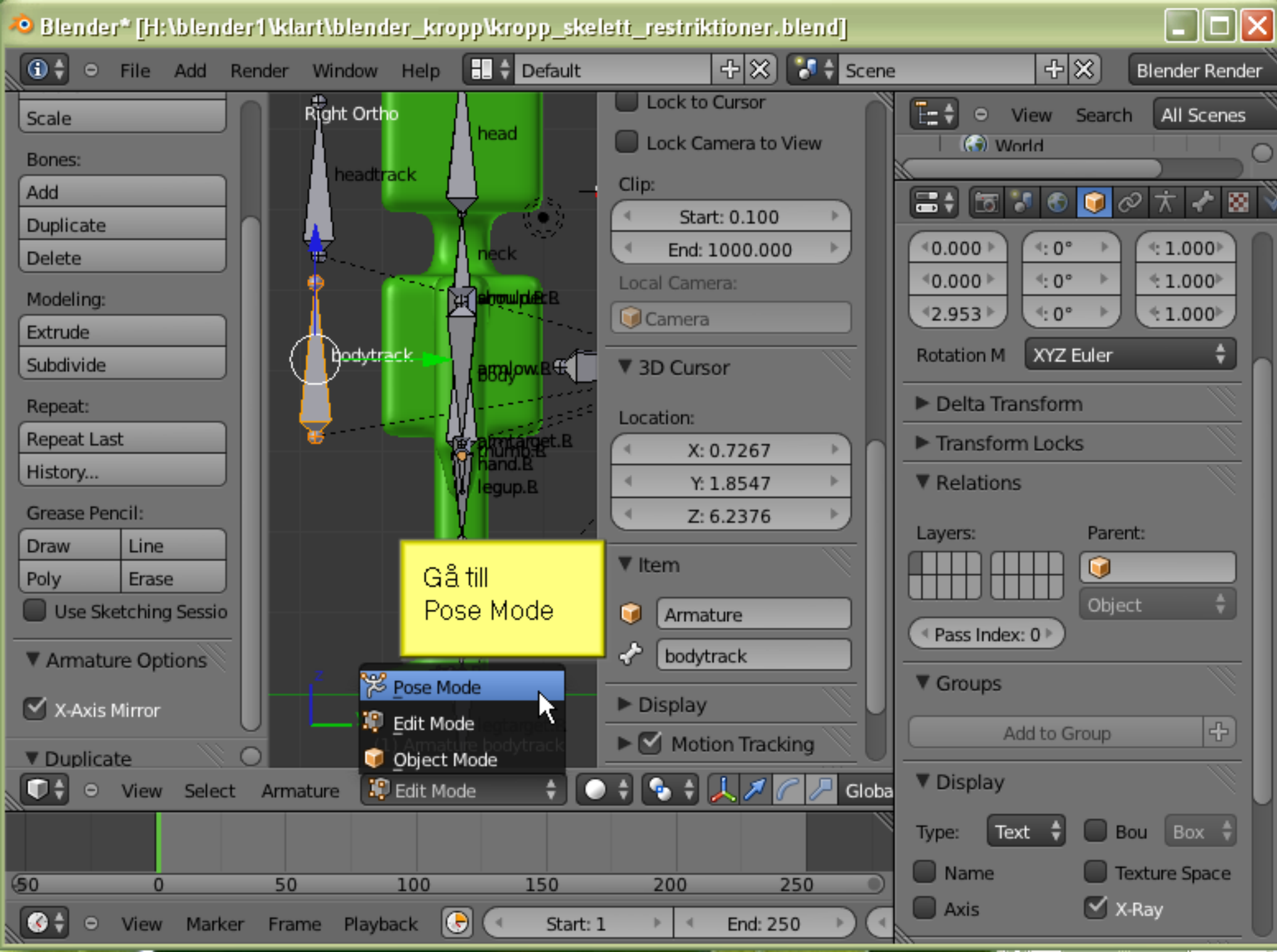




Duplicera det nya benet
framför kroppen
och dra kopian uppåt
så att det hamnar
framför huvudet,

Döp det till headtrack





Scale

In-Between:

Push Relax

Breakdowner

Pose:

Copy Paste

Motion Tracking

Camera Solver

Object Solver

Follow Track

Calculate Paths

Clear Paths

Repeat:

Repeat Last

History...

Grease Pencil:

Draw Line

Polv Frac

Toggle Pose Mode

View Select Pose Pose Mode

Global

50 0 50 100 150 200 250

View Marker Frame Playback

Start: 1 End: 250

User Ortho

head

head track

neck

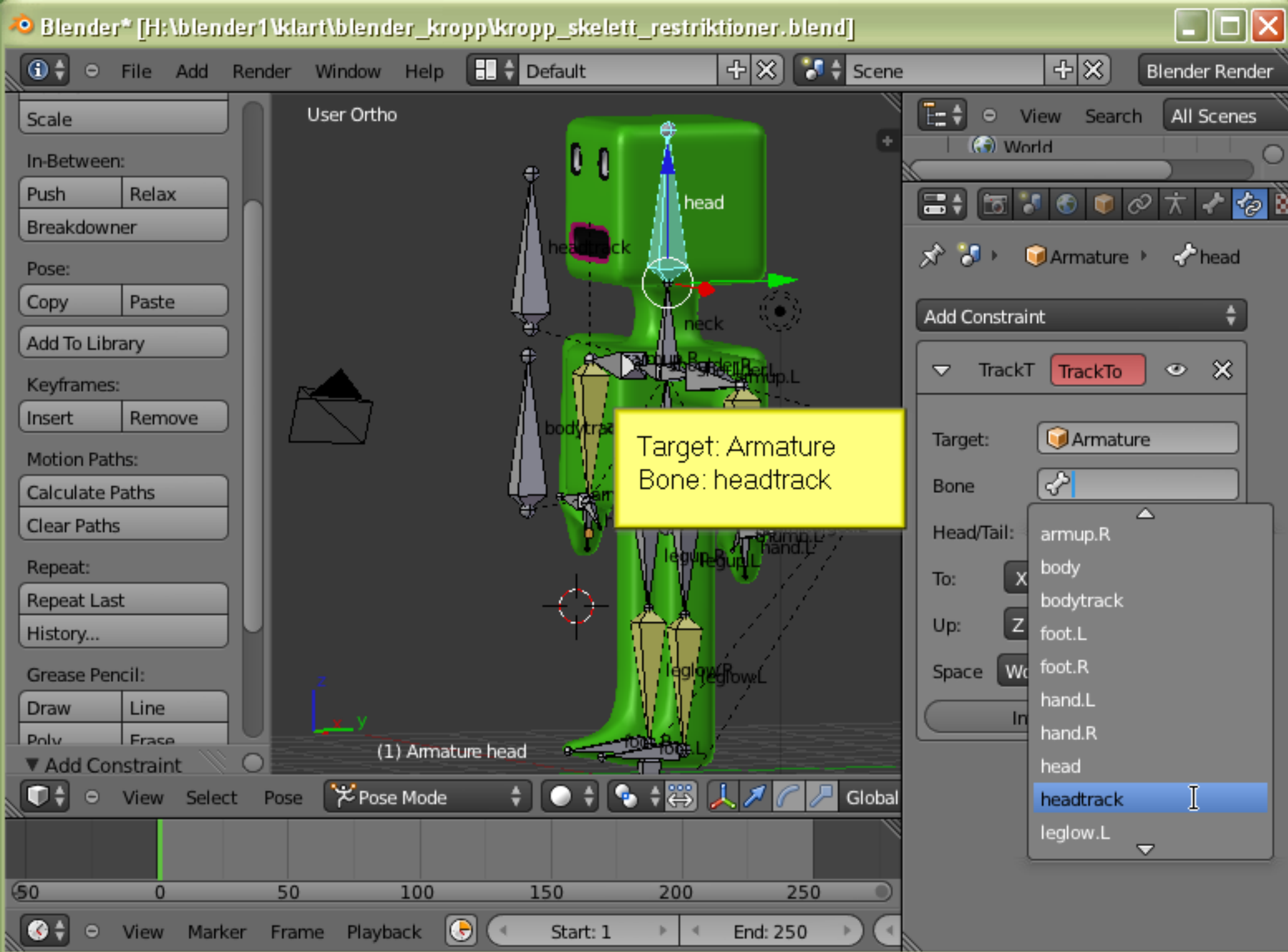
Markera head-benet
Add Constran
Track to

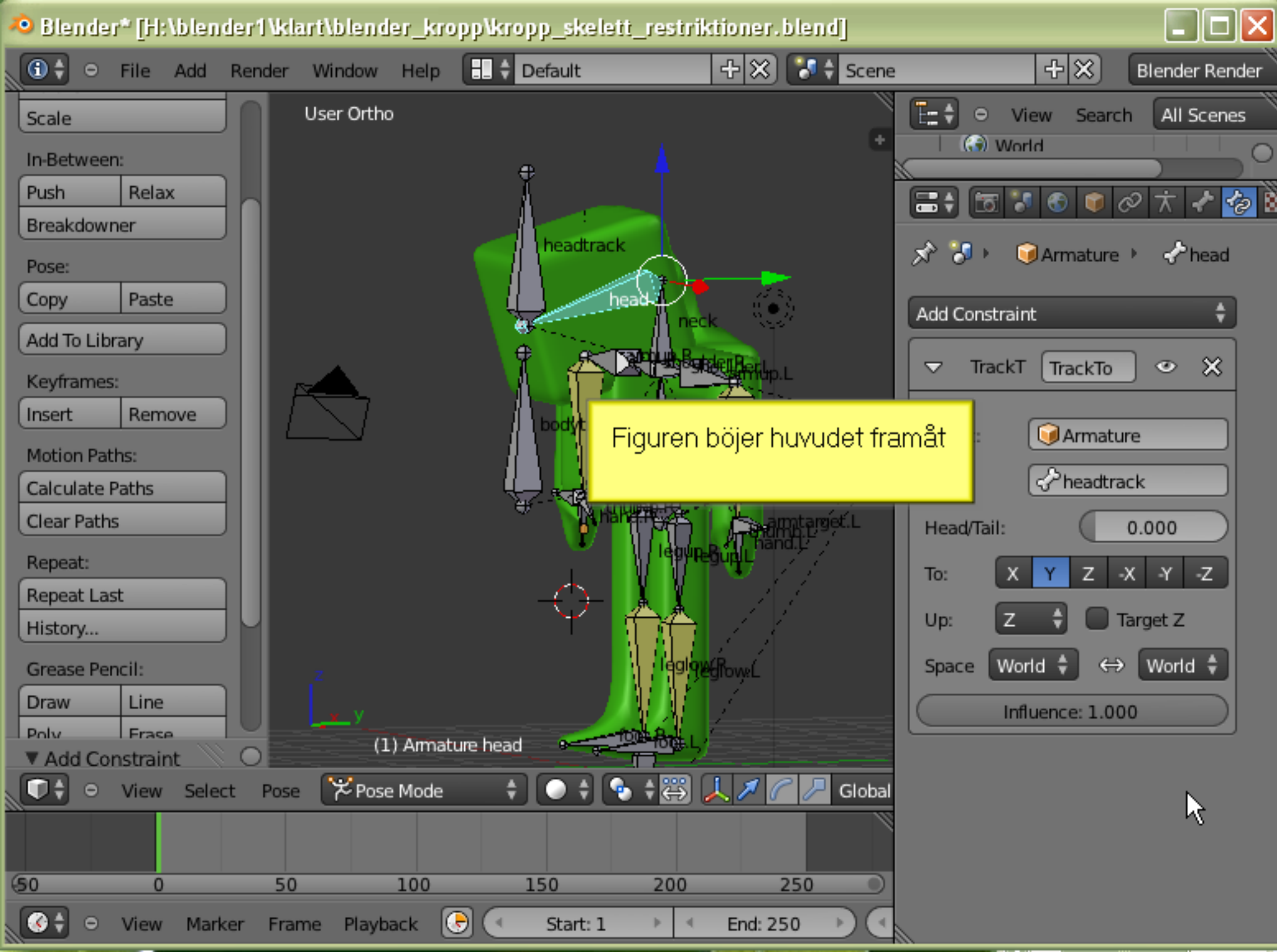
Add Constraint

Transform	Tracking	Relationship
Copy Location	Clamp To	Action
Copy Rotation	Damped Track	Child Of
Copy Scale	Inverse Kinematics	Floor
Copy Transforms	Locked Track	Follow Path
Limit Distance	Spline IK	Pivot
Limit Location	Stretch To	Rigid Body Joint
Limit Rotation	Track To	Script
Limit Scale		
Maintain Volume		
Transformation		

Add a constraint to the active bone
Python: `bpy.ops.pose.constraint_add(type='TRACK_TO')`

(1) Armature head





Scale

In-Between:
Push Relax
Breakdowner

Pose:
Copy Paste

Add To Library

Keyframes:
Insert Remove

Motion Paths:
Calculate Paths
Clear Paths

Repeat:
Repeat Last
History...

Grease Pencil:
Draw Line
Poly Frase

Add Constraint

User Ortho

View Search All Scenes

World

Armature head

Add Constraint

TrackT TrackTo

Target: Armature

Bone: headtrack

Head/Tail: 0.000

Orientation To: X Y Z -X -Y -Z

View Up: Z Target Z

World World

Influence: 1.000

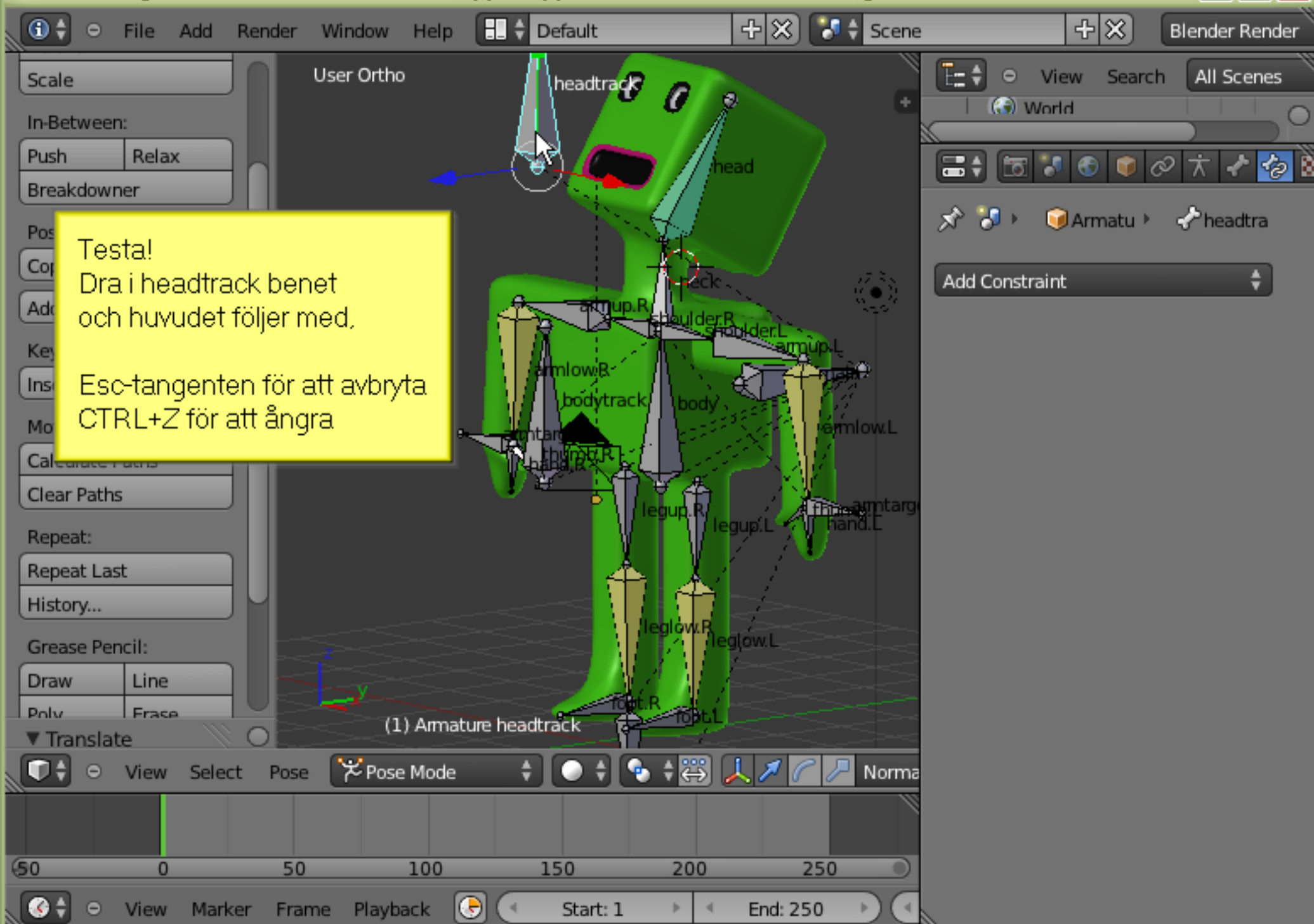
View Select Pose Pose Mode

Start: 1 End: 250

Blender 2.79 interface showing a 3D model of a green humanoid figure in Pose Mode. The figure is labeled with various bones: head, neck, body, arm, hand, leg, foot, etc. A yellow box highlights the text: "Välj To: -Z Up: Y".

The right sidebar shows the "Add Constraint" panel for the "headtrack" bone. The constraint is "TrackTo". The target is "Armature". The bone is "headtrack". The Head/Tail value is 0.000. The "To" axis is set to "Z". The "Up" axis is set to "Y" with "Target Z" checked. The "Space" is set to "World". The Influence is 1.000.

The bottom status bar shows the timeline from 0 to 250 frames, with the current frame at 1. The mode is "Pose Mode".



Scale

User Ortho

In-Between:

Push Relax

Breakdowner

Pose:

Copy Paste

Markera body-benet
Add Constraint
Track To

Motion Tracking

Transform

Tracking

Relationship

Camera Solver

Object Solver

Follow Track

Calculate Paths

Clear Paths

Repeat:

Repeat Last

History...

Grease Pencil:

Draw Line

Polv Frac

Copy Location

Copy Rotation

Copy Scale

Copy Transforms

Limit Distance

Limit Location

Limit Rotation

Limit Scale

Maintain Volume

Transformation

Clamp To

Damped Track

Inverse Kinematics

Locked Track

Spline IK

Stretch To

Track To

Action

Child Of

Floor

Follow Path

Pivot

Rigid Body Joint

Script

Add a constraint to the active bone
Python: bpy.ops.pose.constraint_add(type='TRACK_TO')

(1) Amature body

Delete Constraint

View Select Pose Pose Mode

50 0 50 100 150 200 250

View Marker Frame Playback Start: 1 End: 250

View Marker Frame Playback Start: 1 End: 250

(1) Armature body

Välj
Target: Armature
Bone: bodytrack

Kroppen böjer sig

Influence: 1.000

100

Välj
To: Z
Up: Y


(1) Armature body


1



dy

×

 Armature

 bodytrack

0.000

7

d.

Influence: 1,000

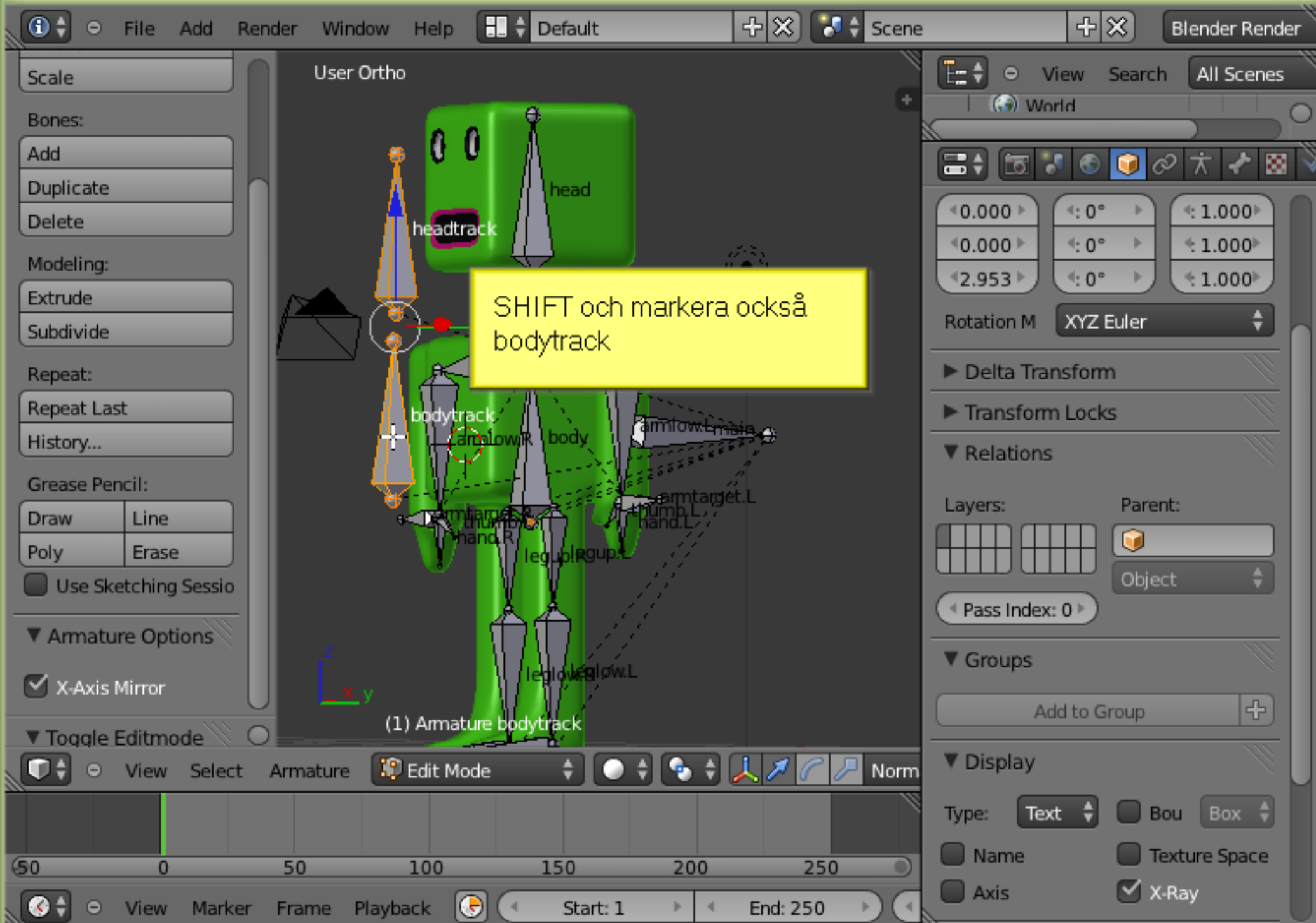
250

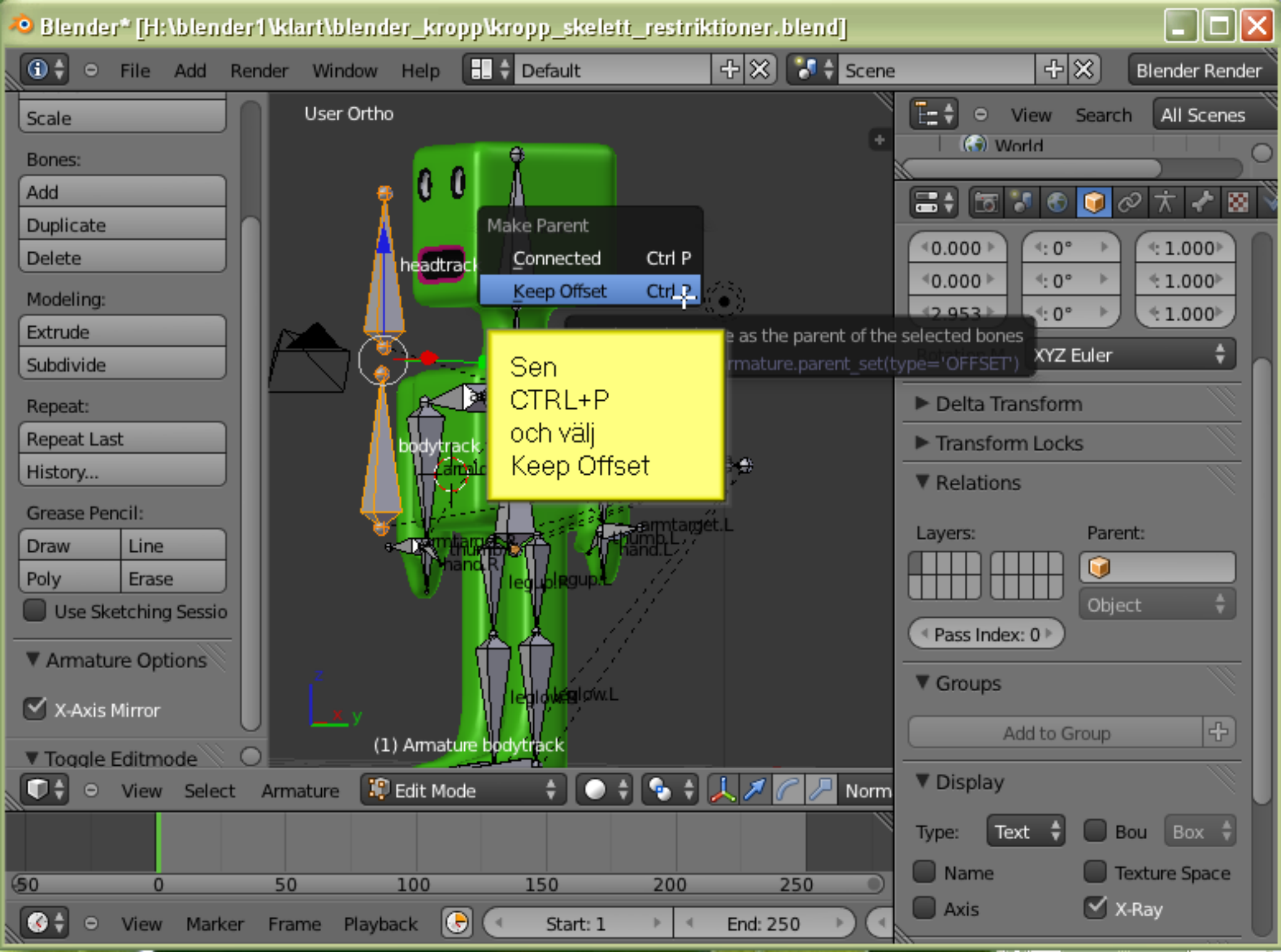
End: 250

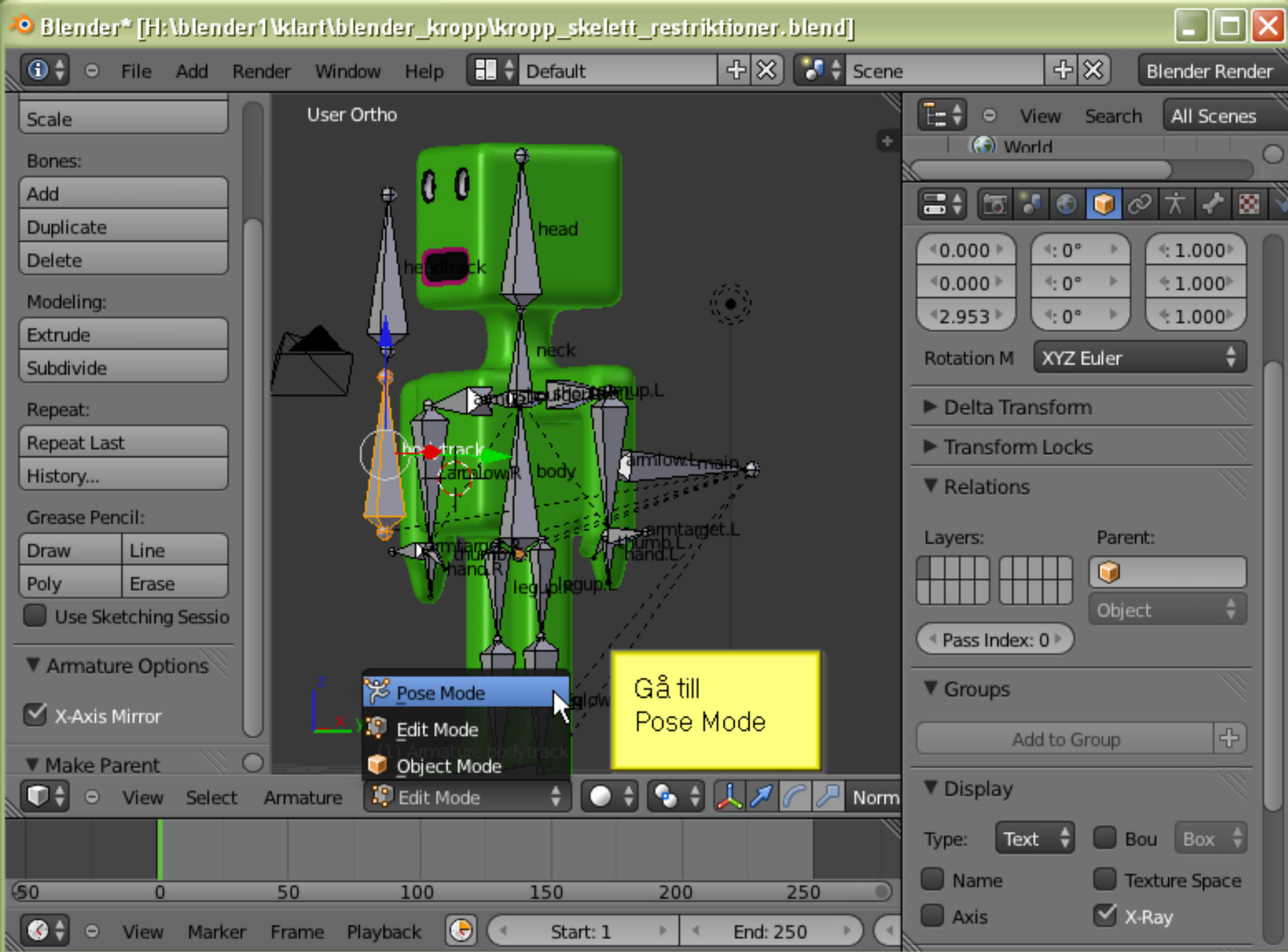


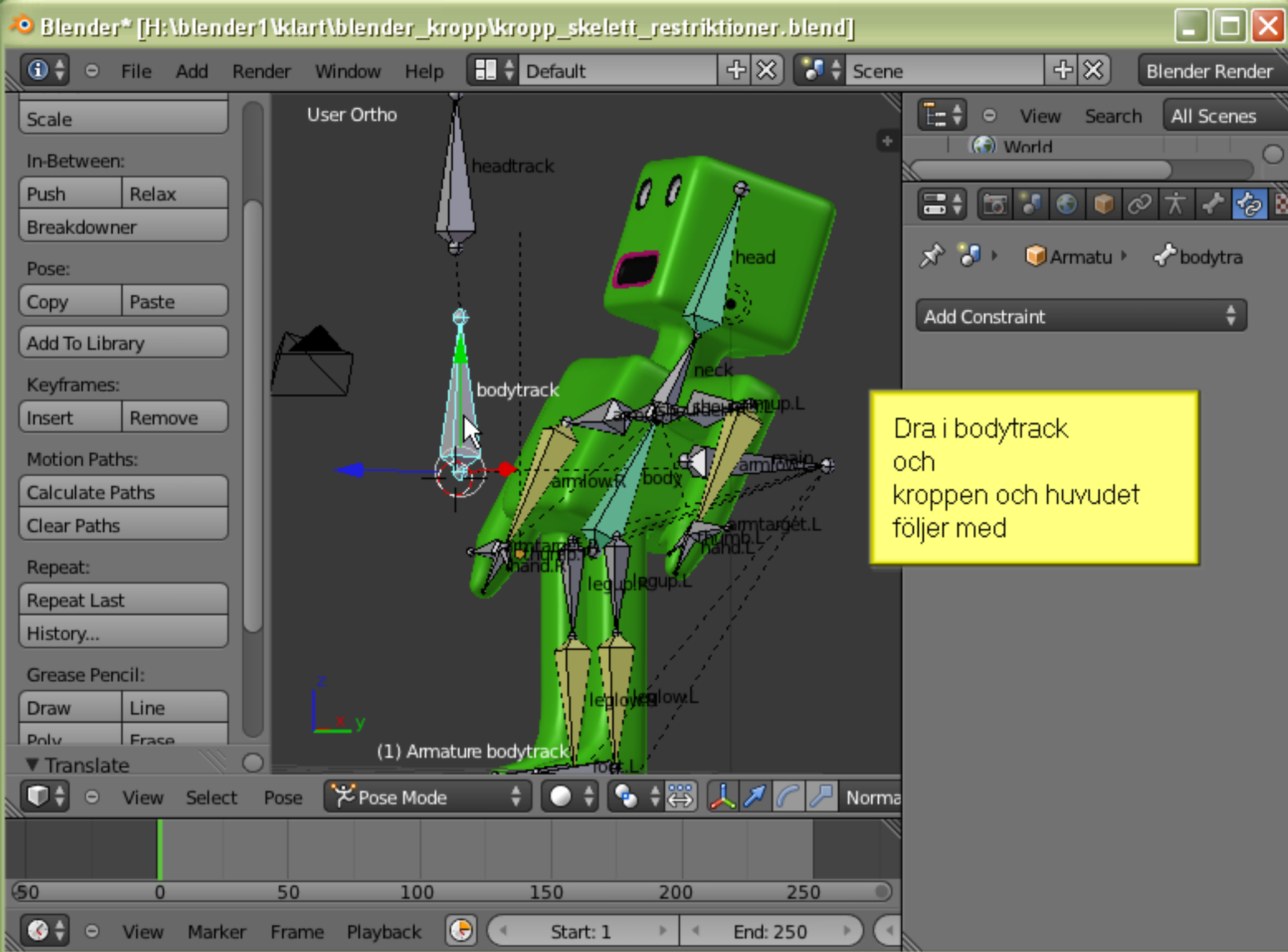
lay

End: 250









ma

Category	Value
total	100

Dra i
headtrack
och endast
huvudet följer med.

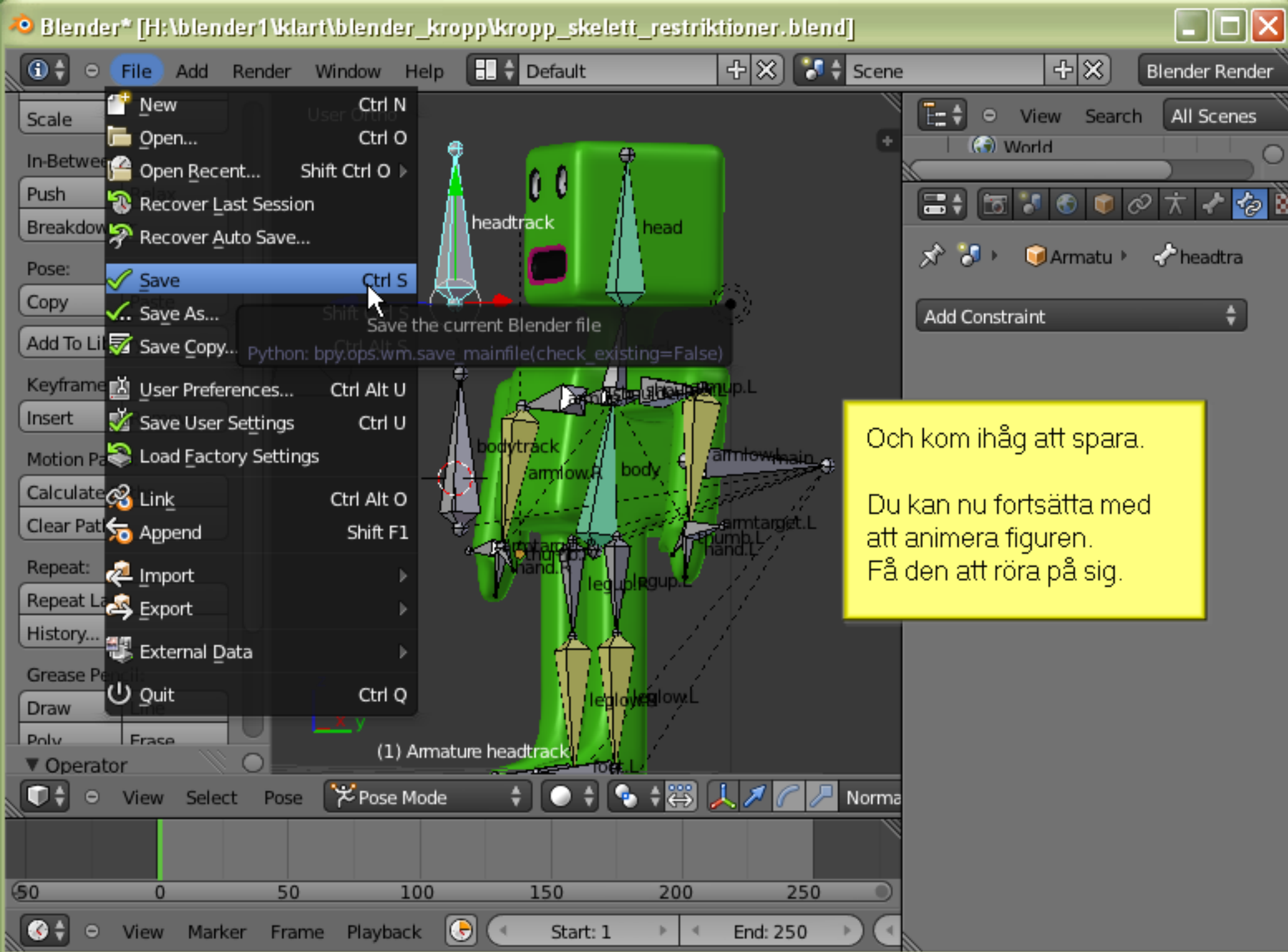
All Scenes

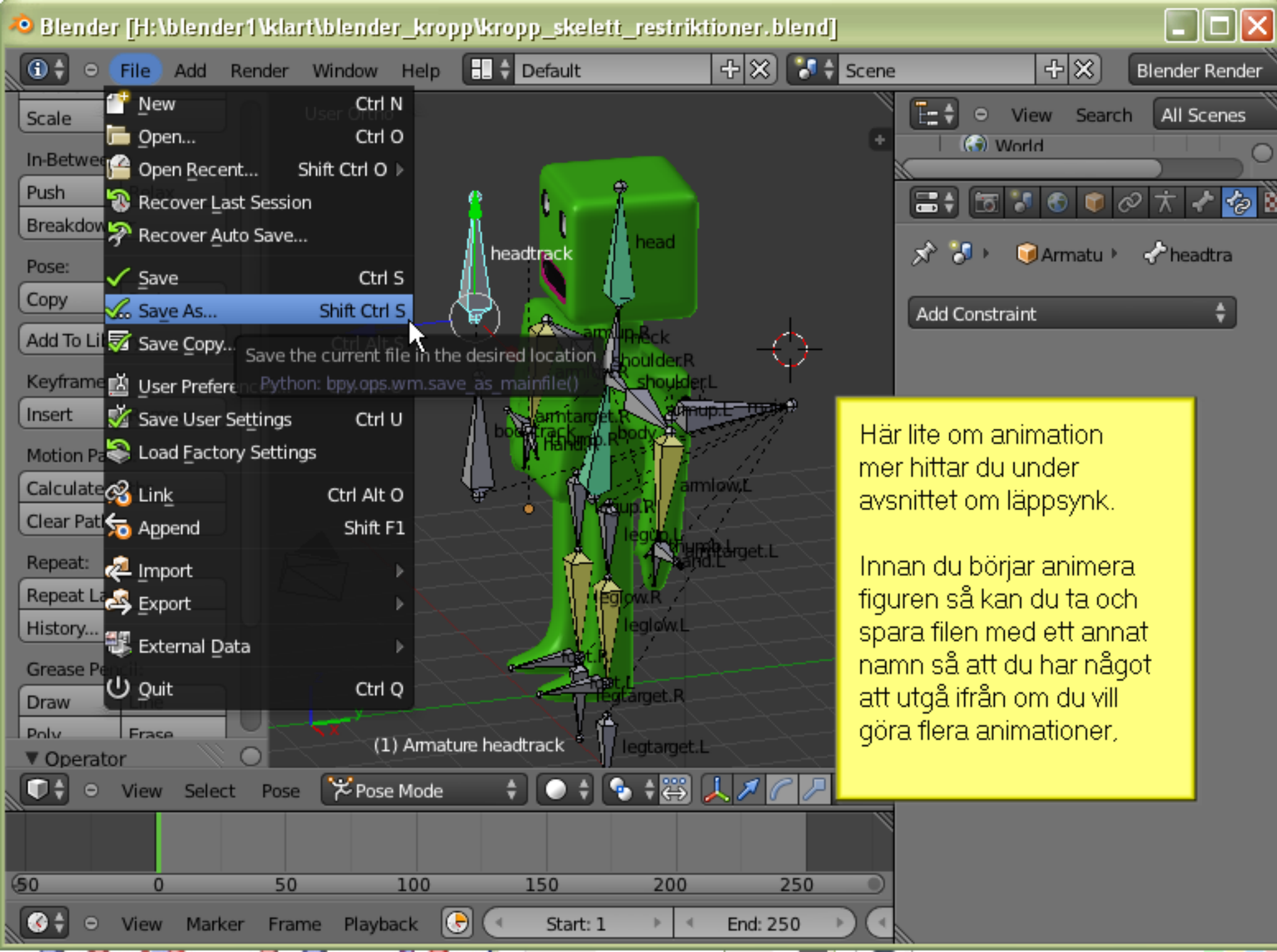


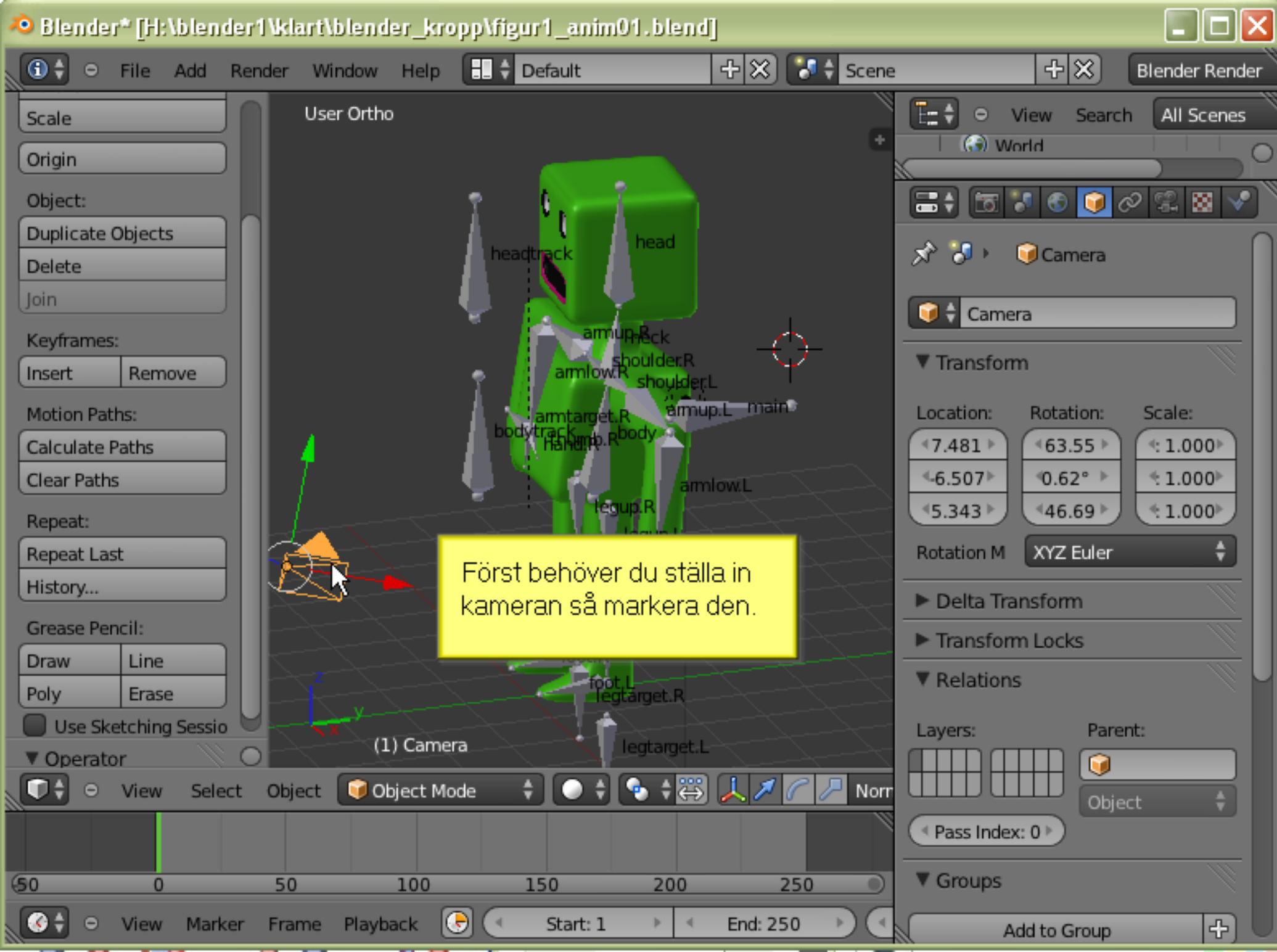
Add Constraint

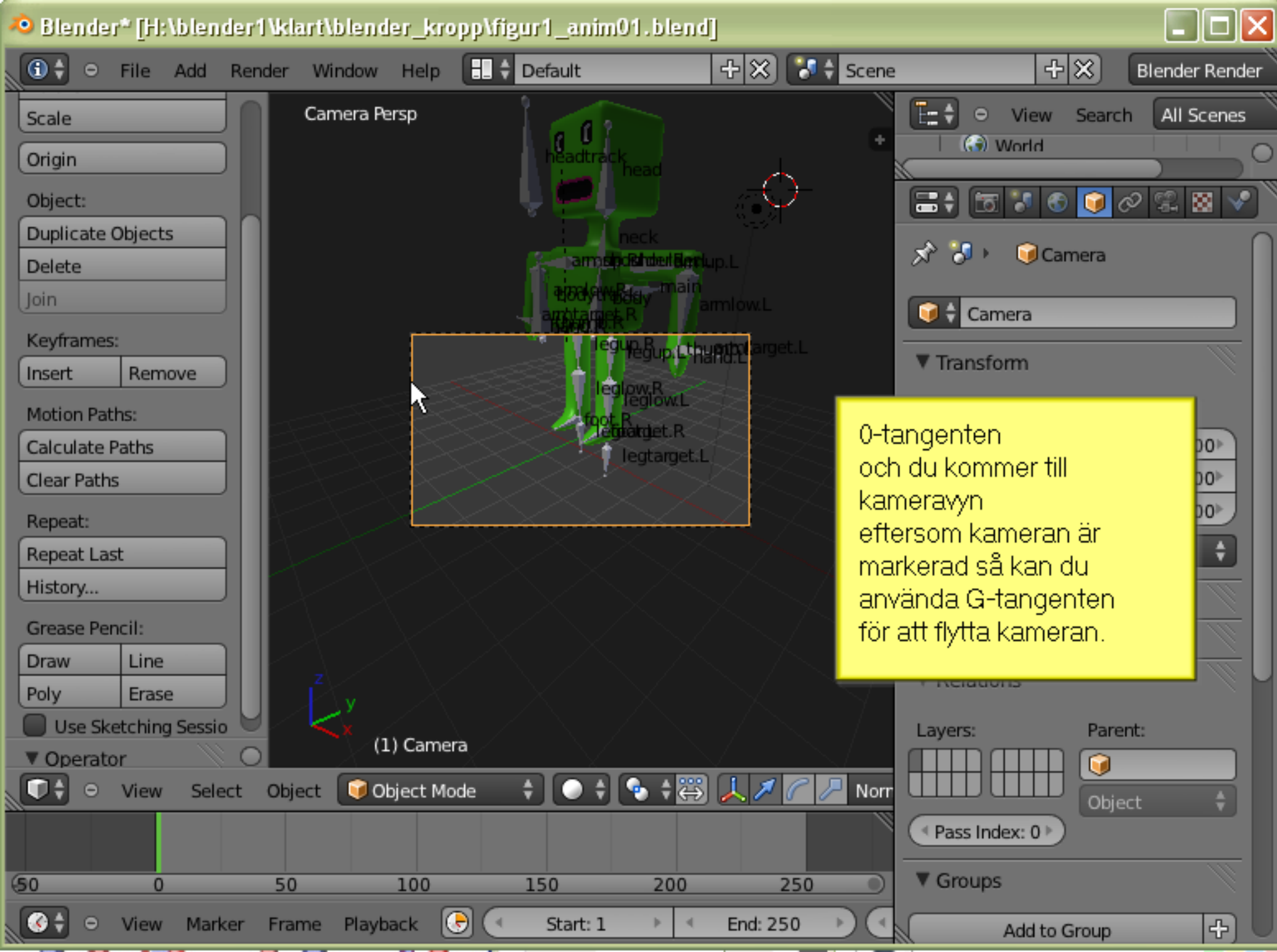
250

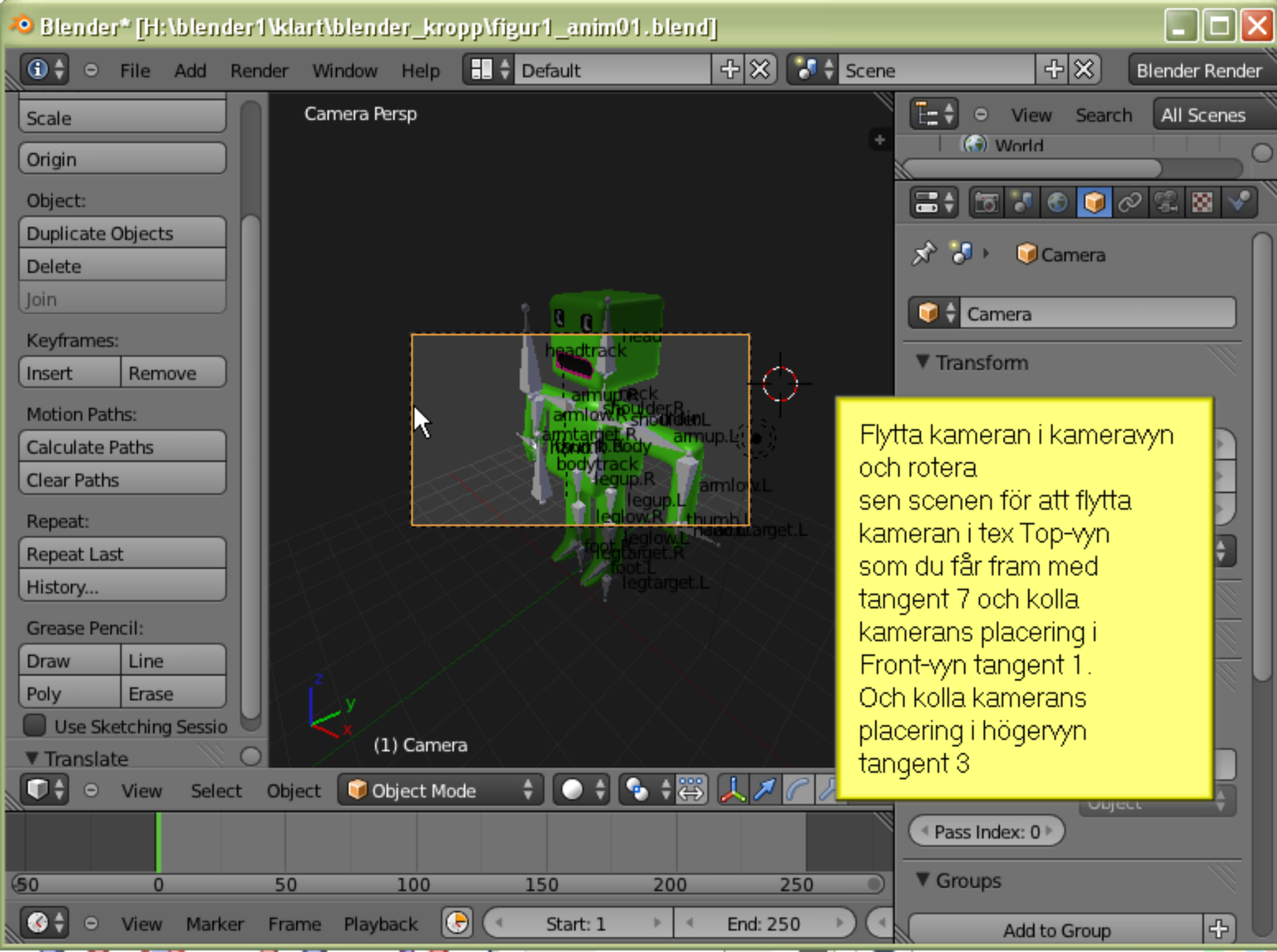
End: 250







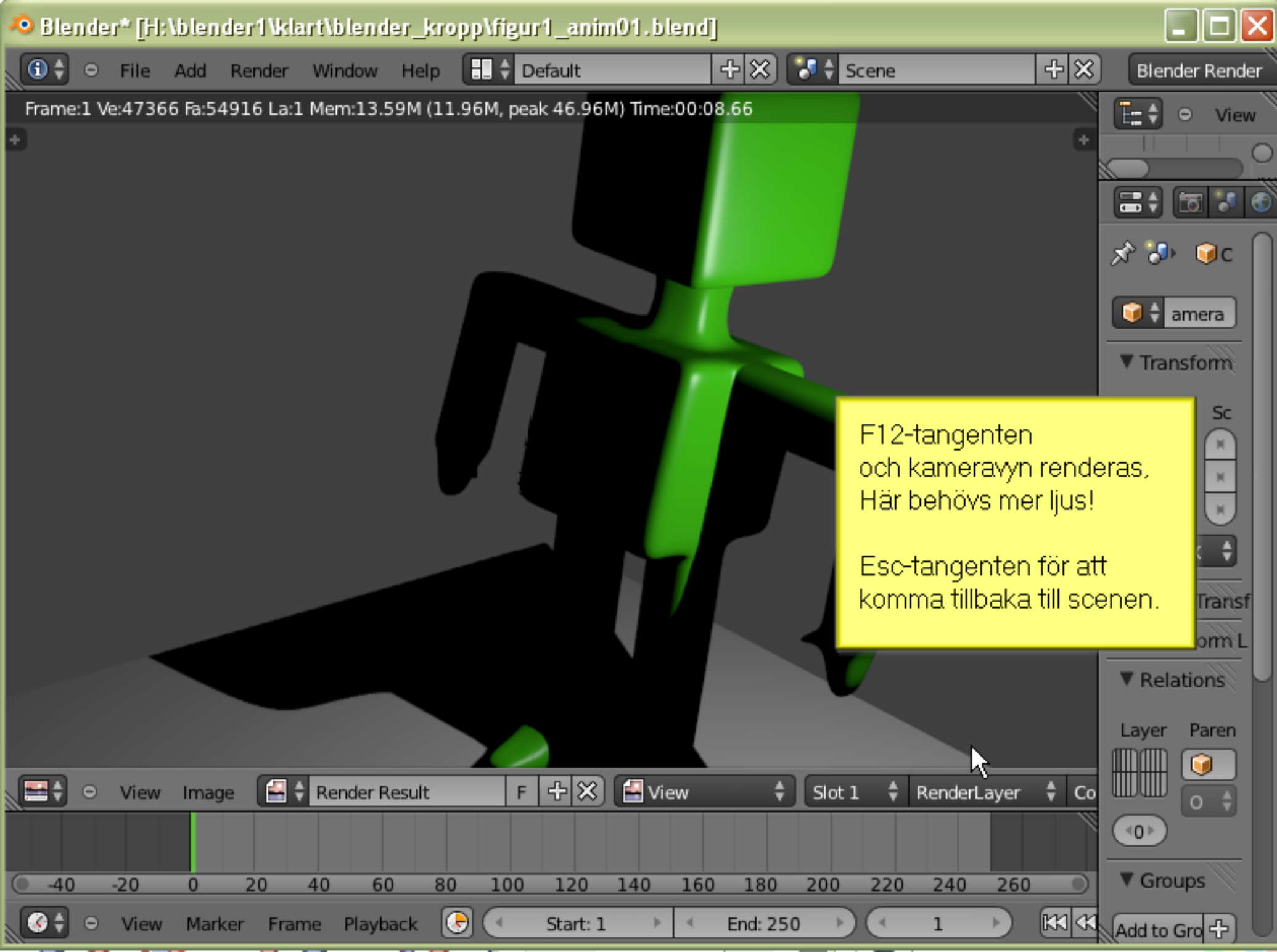


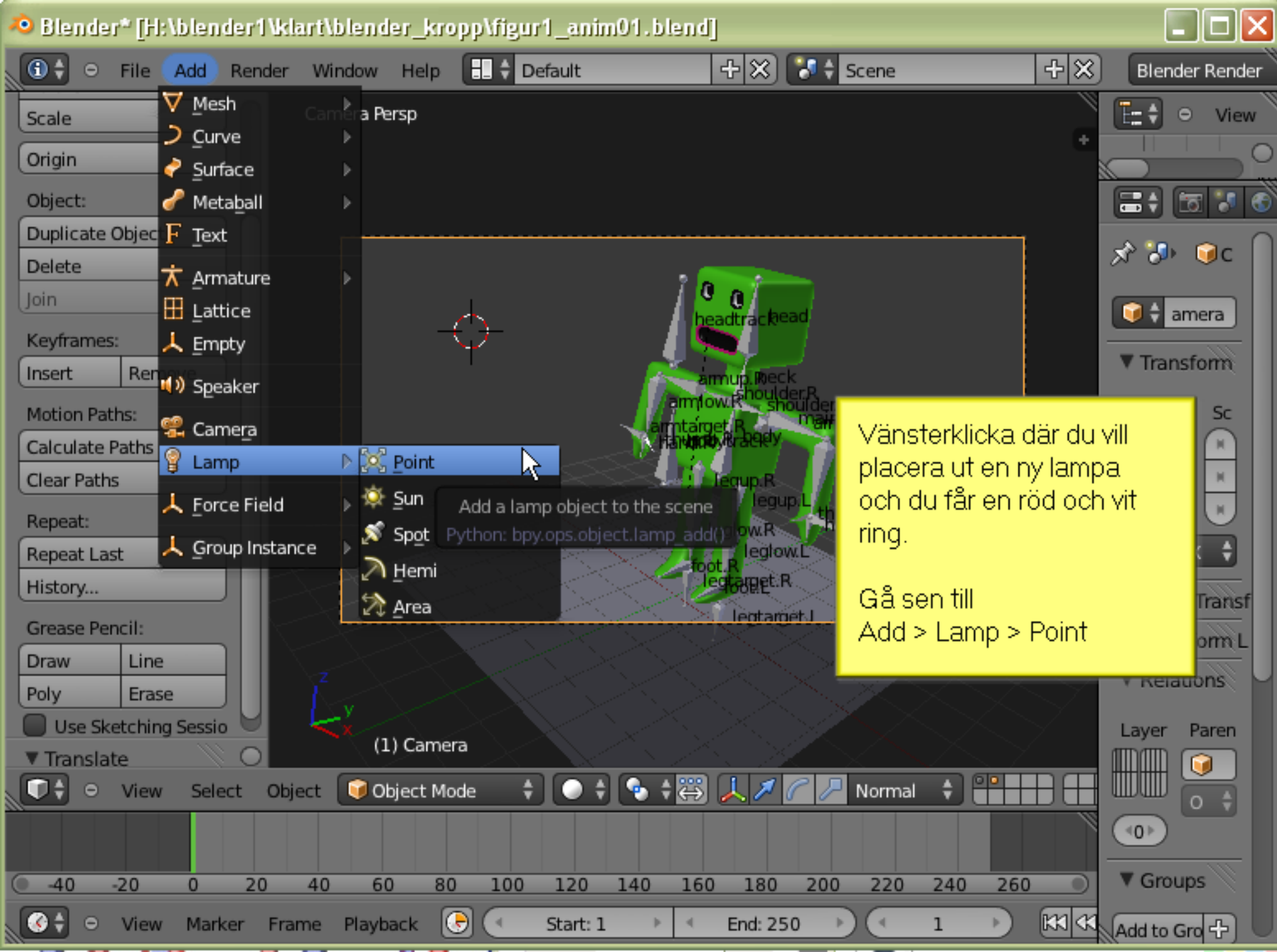


1

(1) Camera

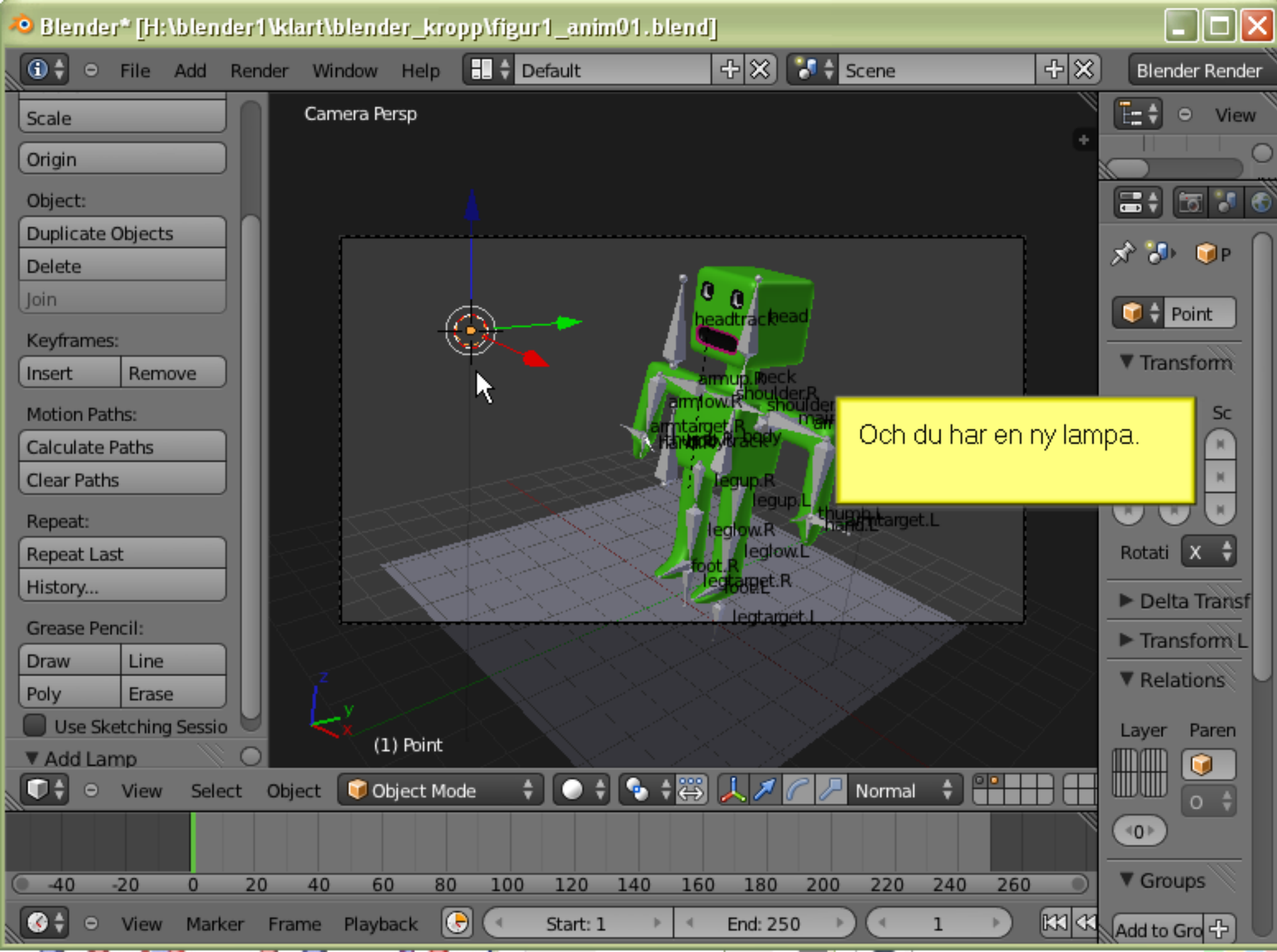
+



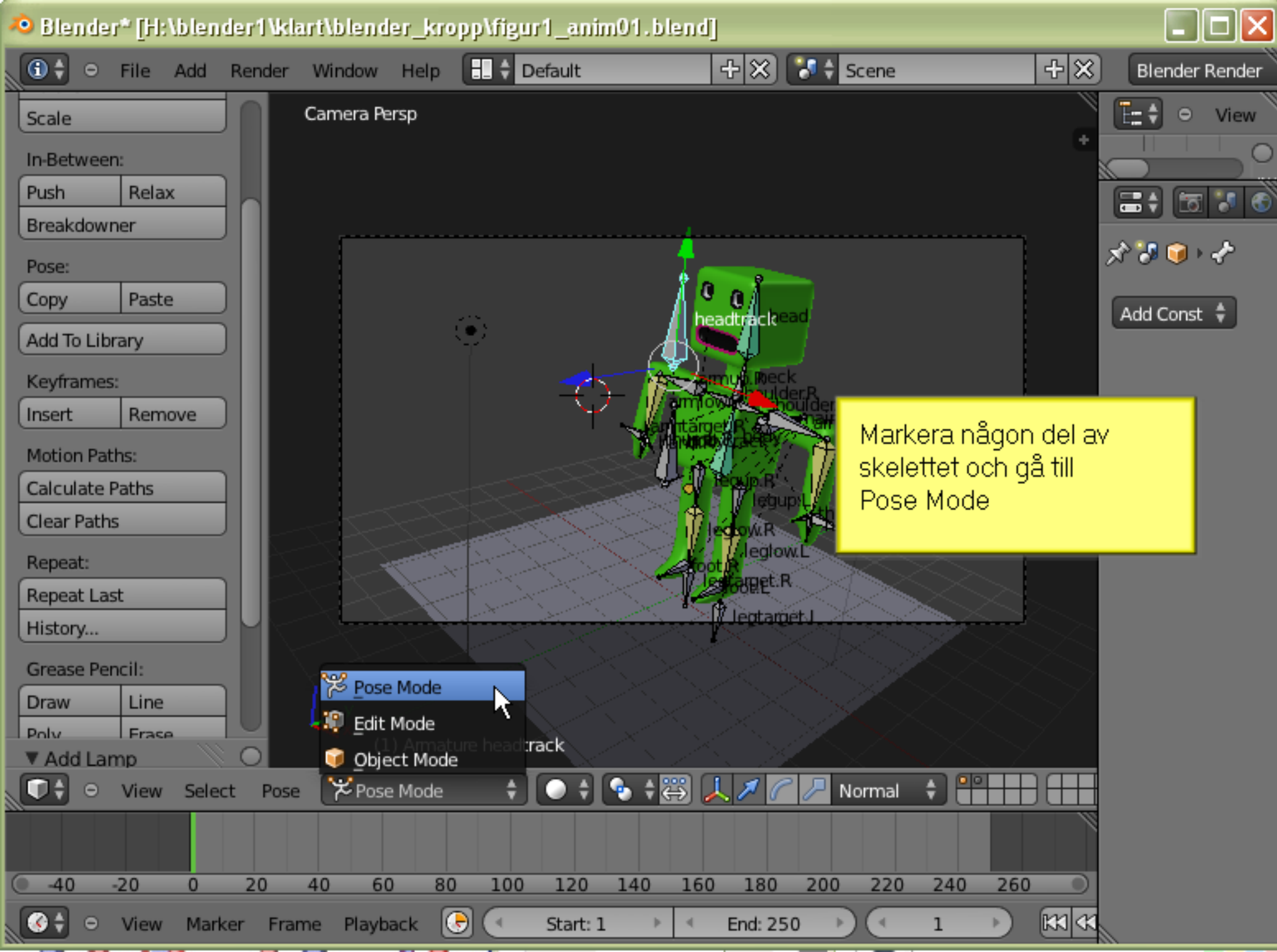


Vänsterklicka där du vill placera ut en ny lampa och du får en röd och vit ring.

Gå sen till
Add > Lamp > Point

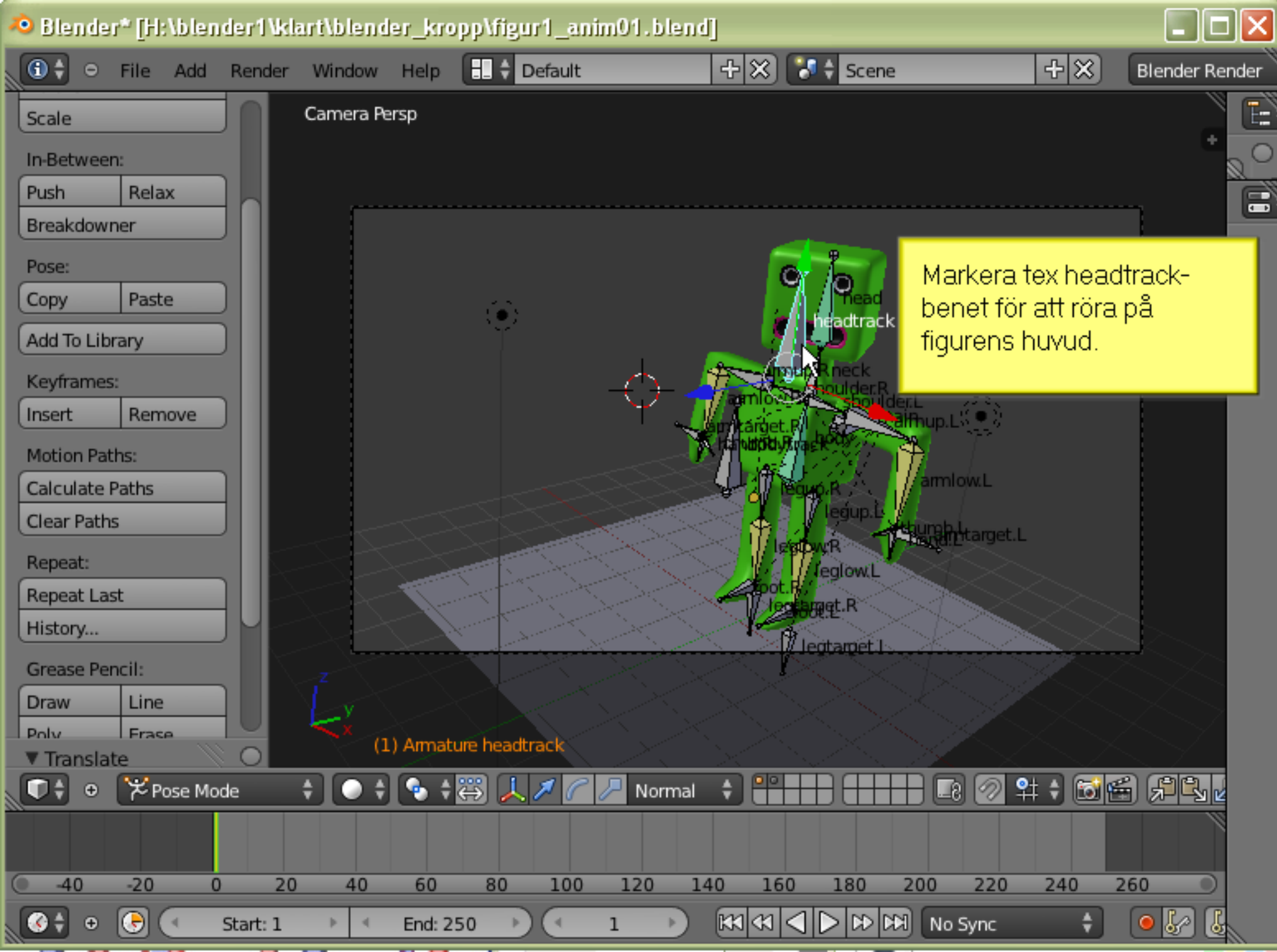






Markera den röda knappen för att kunna skapa Key Frames - nyckelbilds-rutor - på vilka Blender kommer ihåg figurens positioner.

260





Scale

In-Between:

Push

Relax

Breakdown

Pose:

Copy

Paste

Add To Library

Keyframes:

Insert

Remove

Motion Paths:

Calculate Paths

Clear Paths

Repeat:

Repeat Last

History...

Grease Pencil:

Draw

Line

Poly

Frace

▼ Translate



Pose Mode



Du kan minska på antalet rutor till tex 150 så går det snabbare att rendera filmen.

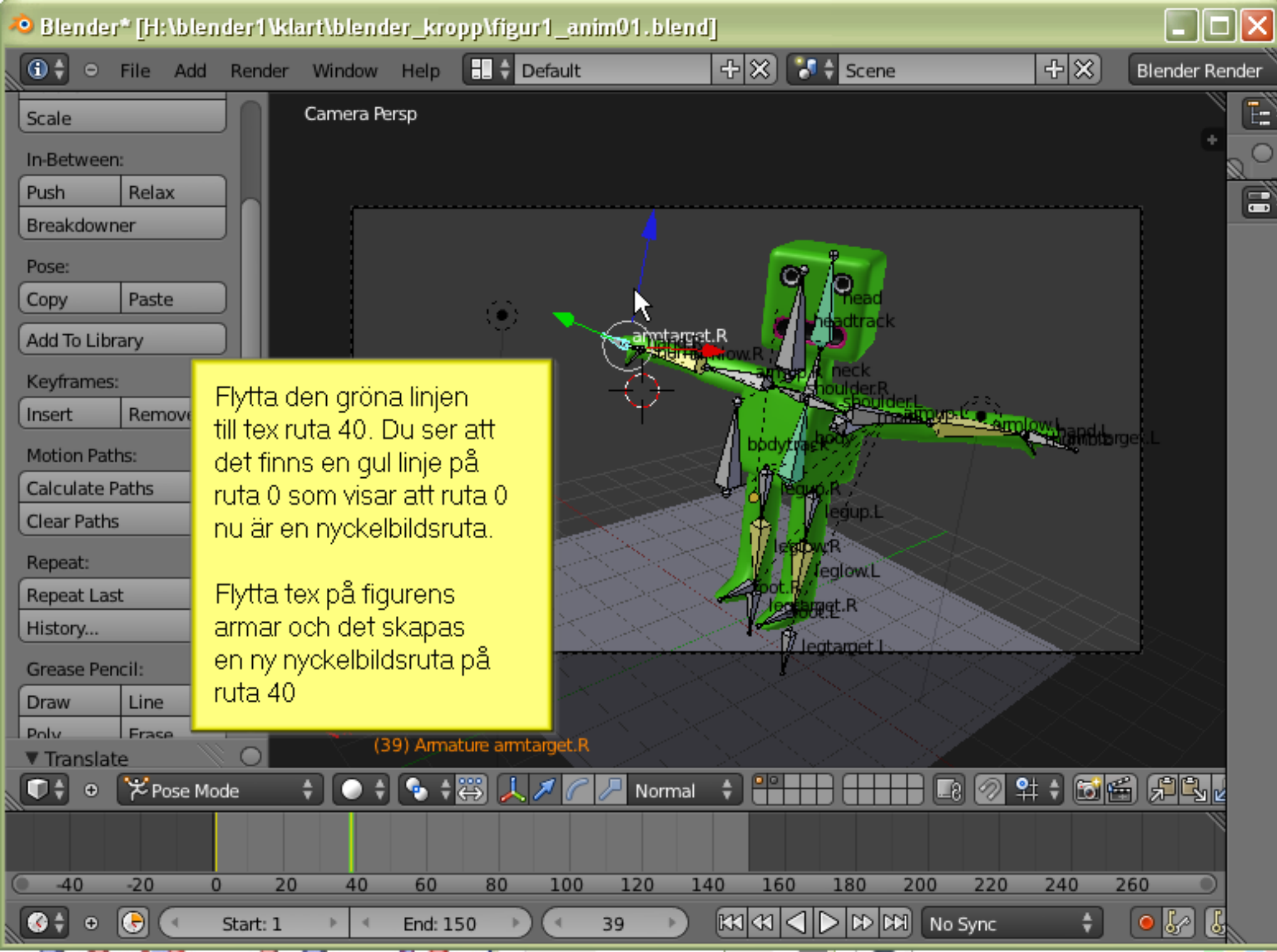
Start: 1

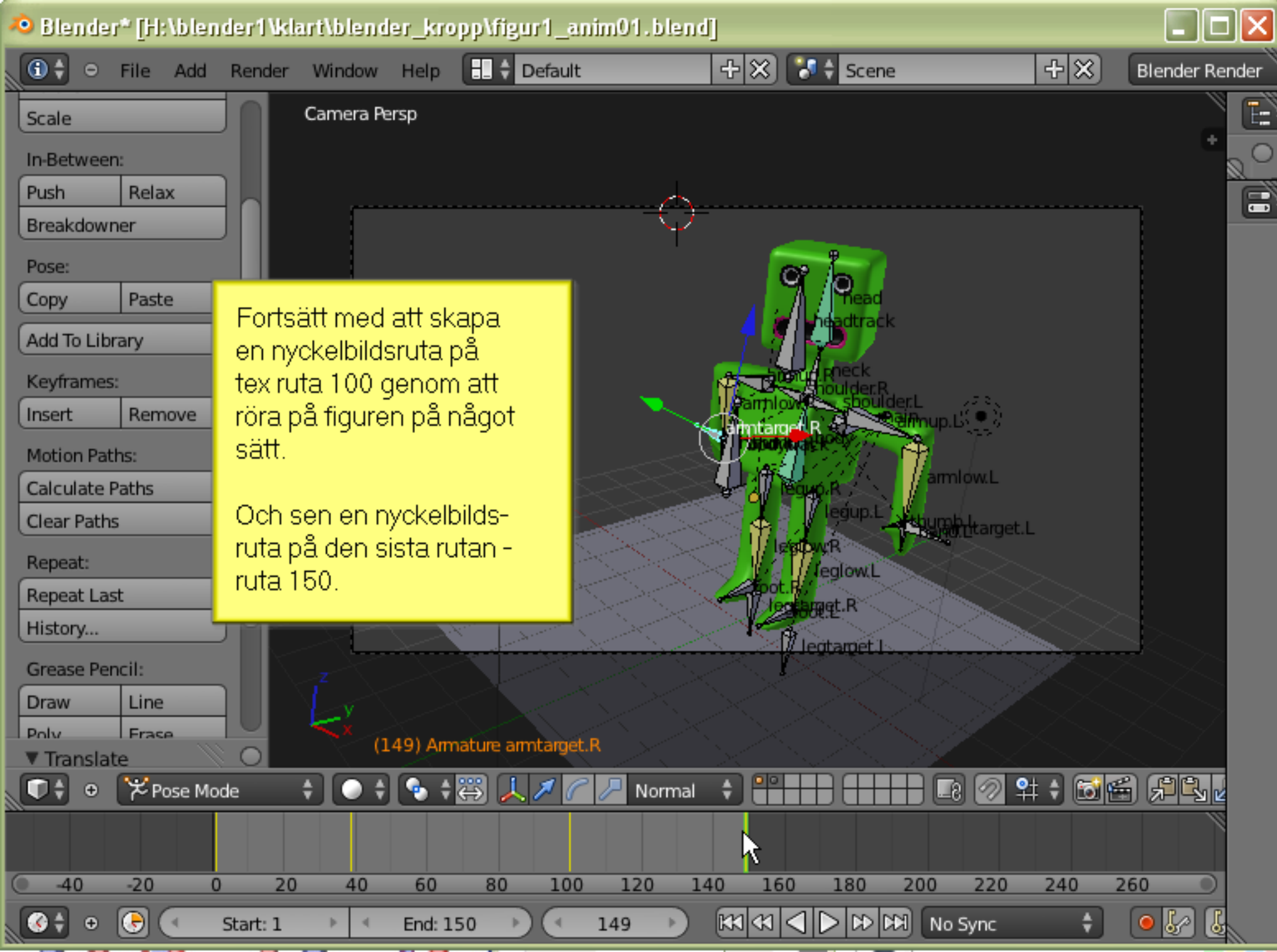
150

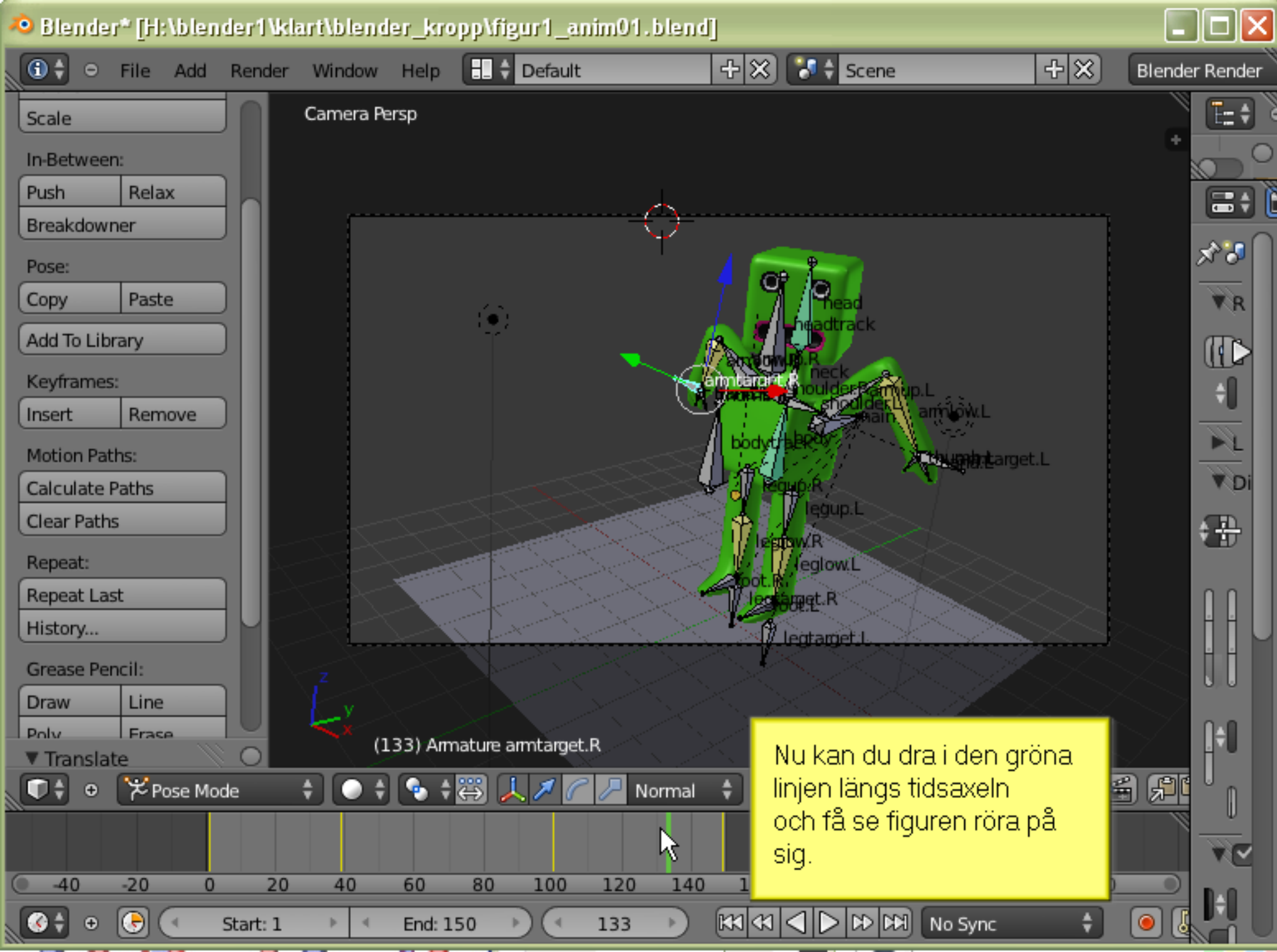
1

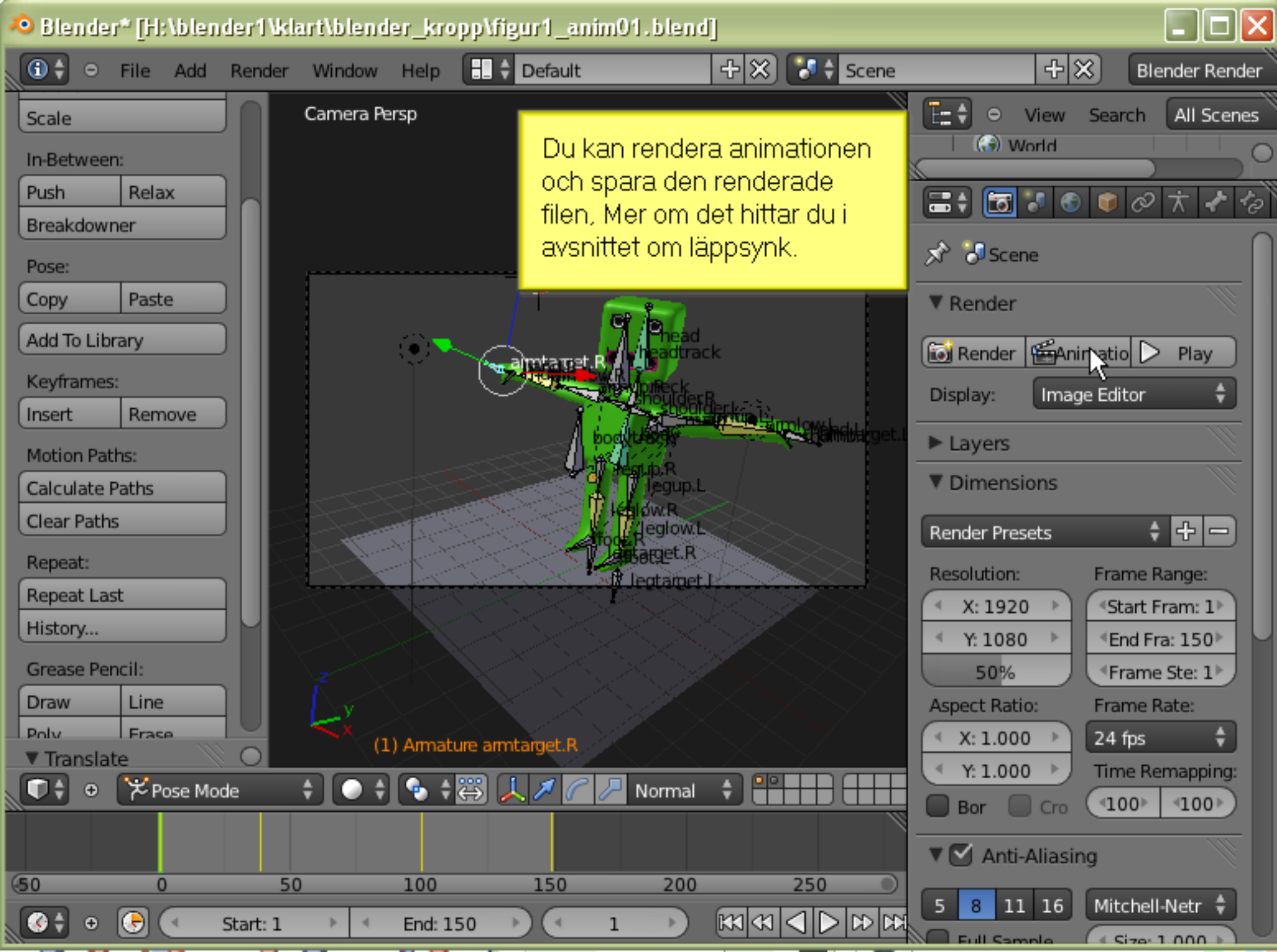
No Sync

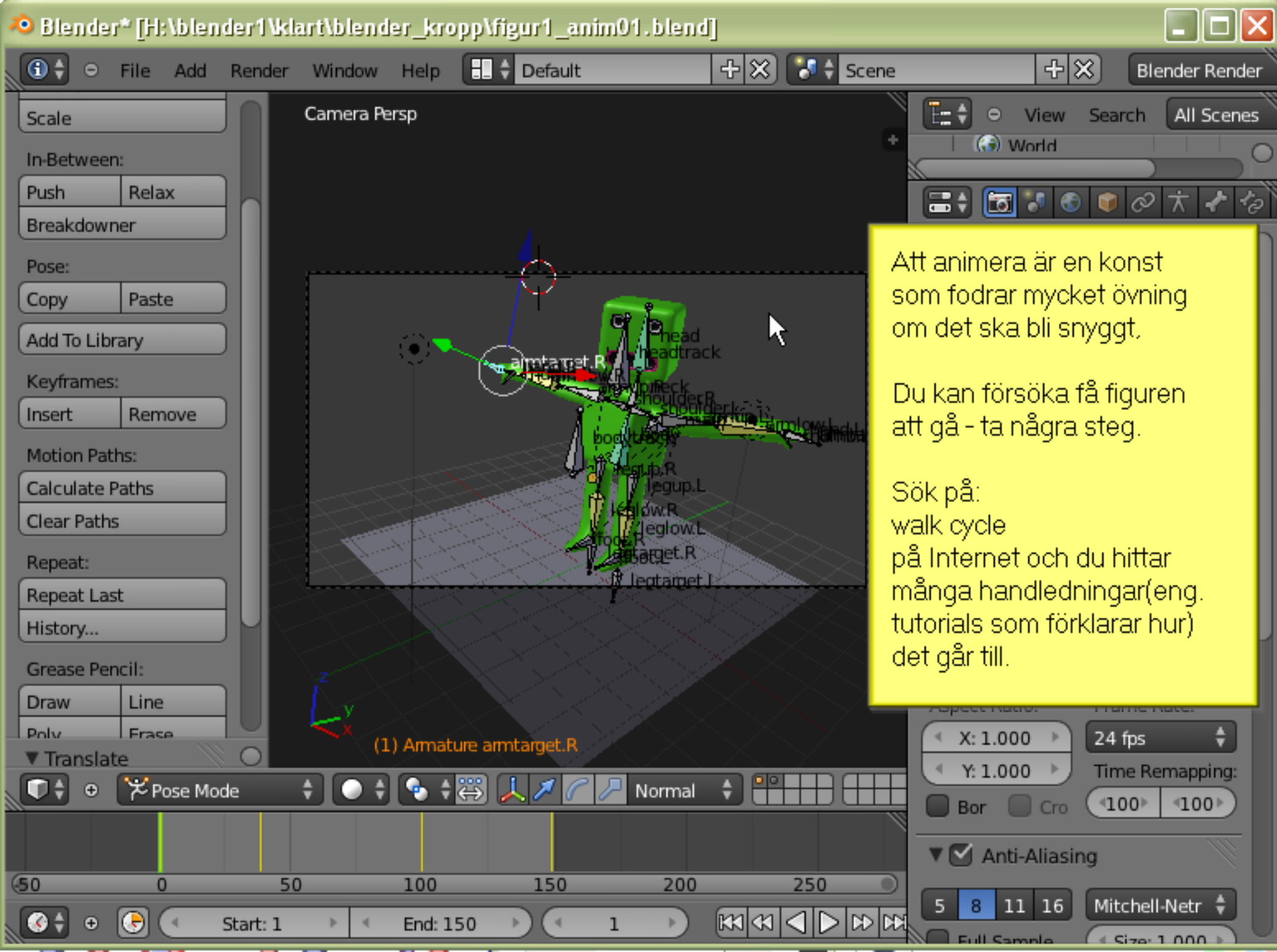


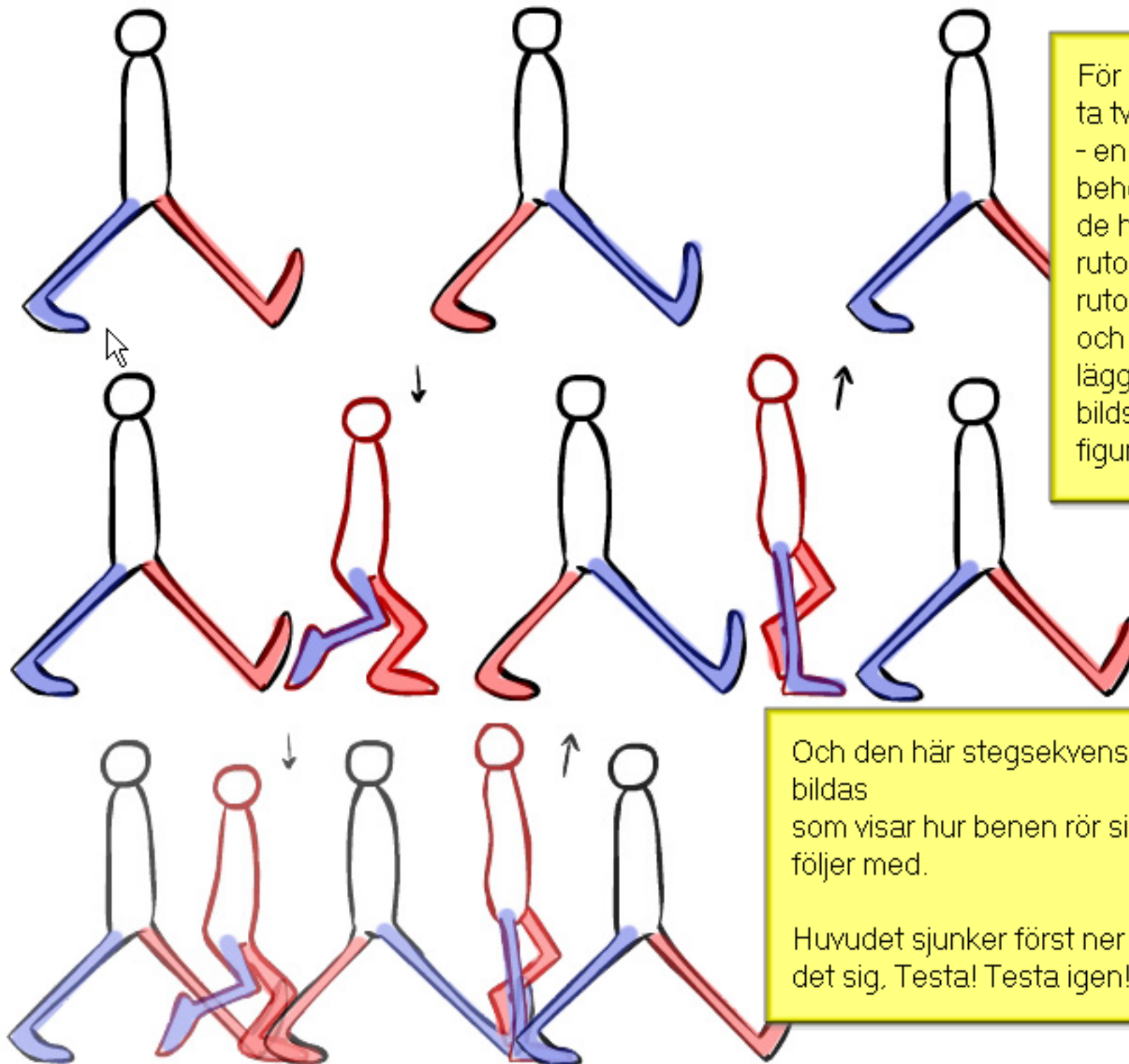












För att få figuren att ta två steg - en walk cycle - så behöver du skapa de här tre nyckelbilds-rutorna med ett antal rutors mellanrum och sen mellan dessa lägga in två nyckel-bildsrutor som visar hur figuren kliver framåt.

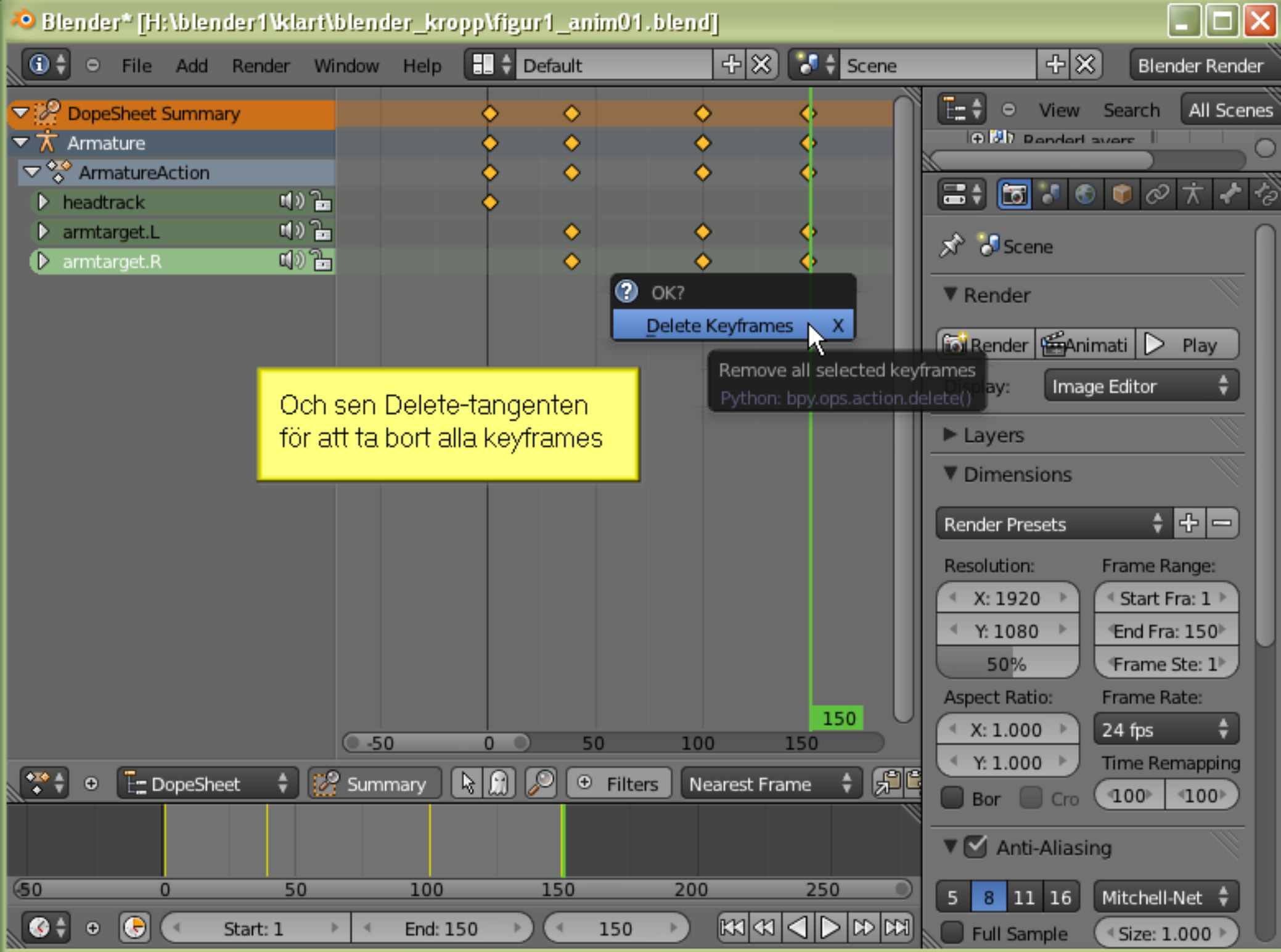
Och den här stegsekvensen kommer att bildas som visar hur benen rör sig och kroppen följer med.

Huvudet sjunker först ner och sen höjer det sig. Testa! Testa igen! Och igen!

The image shows the Blender 2.79 DopeSheet editor interface. The main area displays a timeline with keyframes for an armature action. A yellow text box in the center of the timeline reads: "Här finns alla keyframes. A-tangenten väljer alla - gör alla keyframes gula." (Here are all the keyframes. The A-tangent selects all - makes all keyframes yellow.)

The interface includes the following elements:

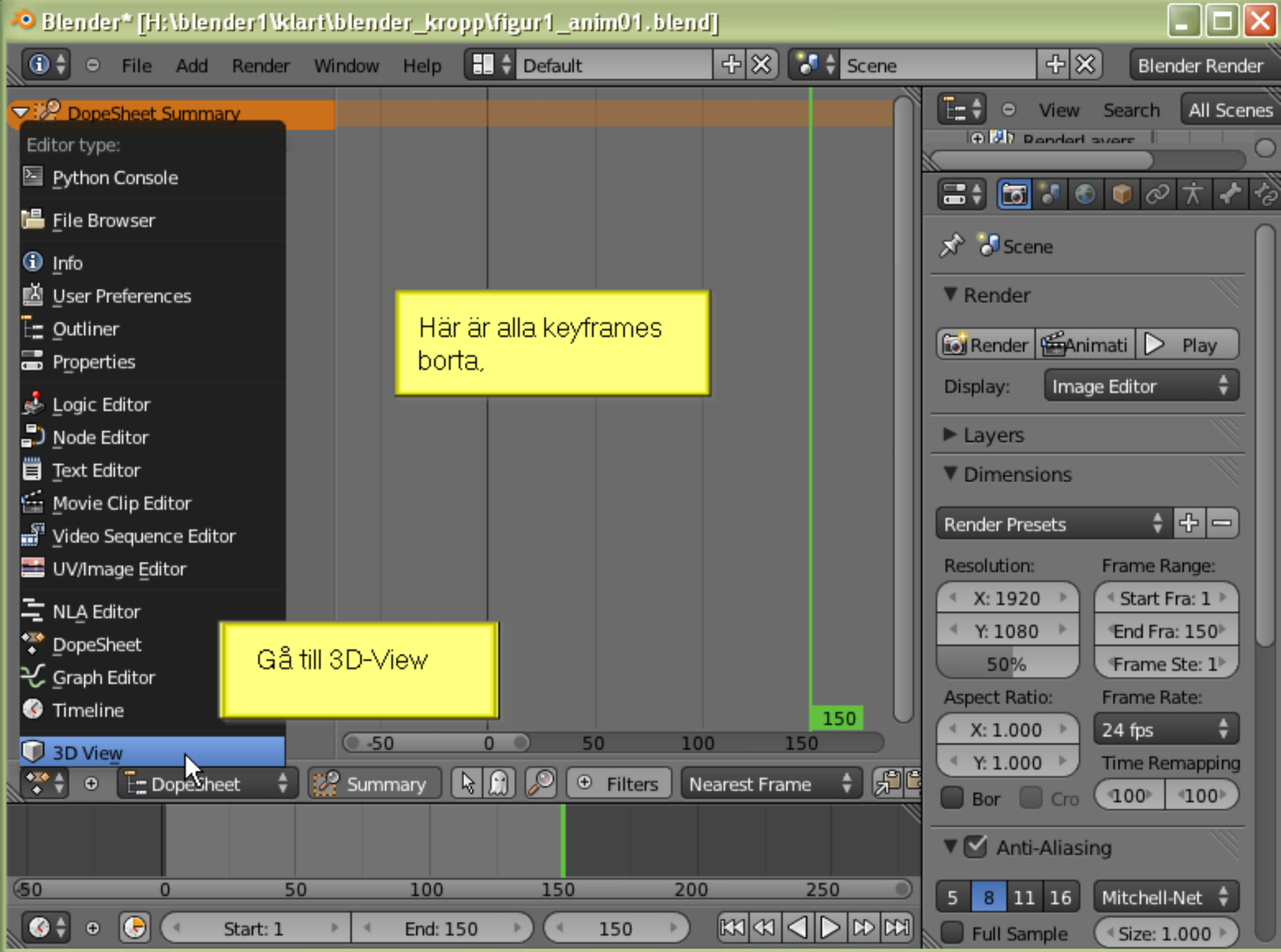
- Top Bar:** File, Add, Render, Window, Help. Default scene selected.
- Left Panel:** DopeSheet Summary, Armature, ArmatureAction, headtrack, armtarget.L, armtarget.R.
- Right Panel:** View, Search, All Scenes, Render, Animation, Play, Display: Image Editor, Layers, Dimensions, Render Presets, Resolution (X: 1920, Y: 1080, 50%), Frame Range (Start Fra: 1, End Fra: 150, Frame Ste: 1), Aspect Ratio (X: 1.000, Y: 1.000), Frame Rate (24 fps), Time Remapping (Bor, Cro, 100, 100), Anti-Aliasing (5, 8, 11, 16, Mitchell-Net, Full Sample, Size: 1.000).
- Timeline:** A horizontal axis with a green vertical line at frame 150. The timeline is divided into segments: DopeSheet, Summary, Filters, and Nearest Frame.

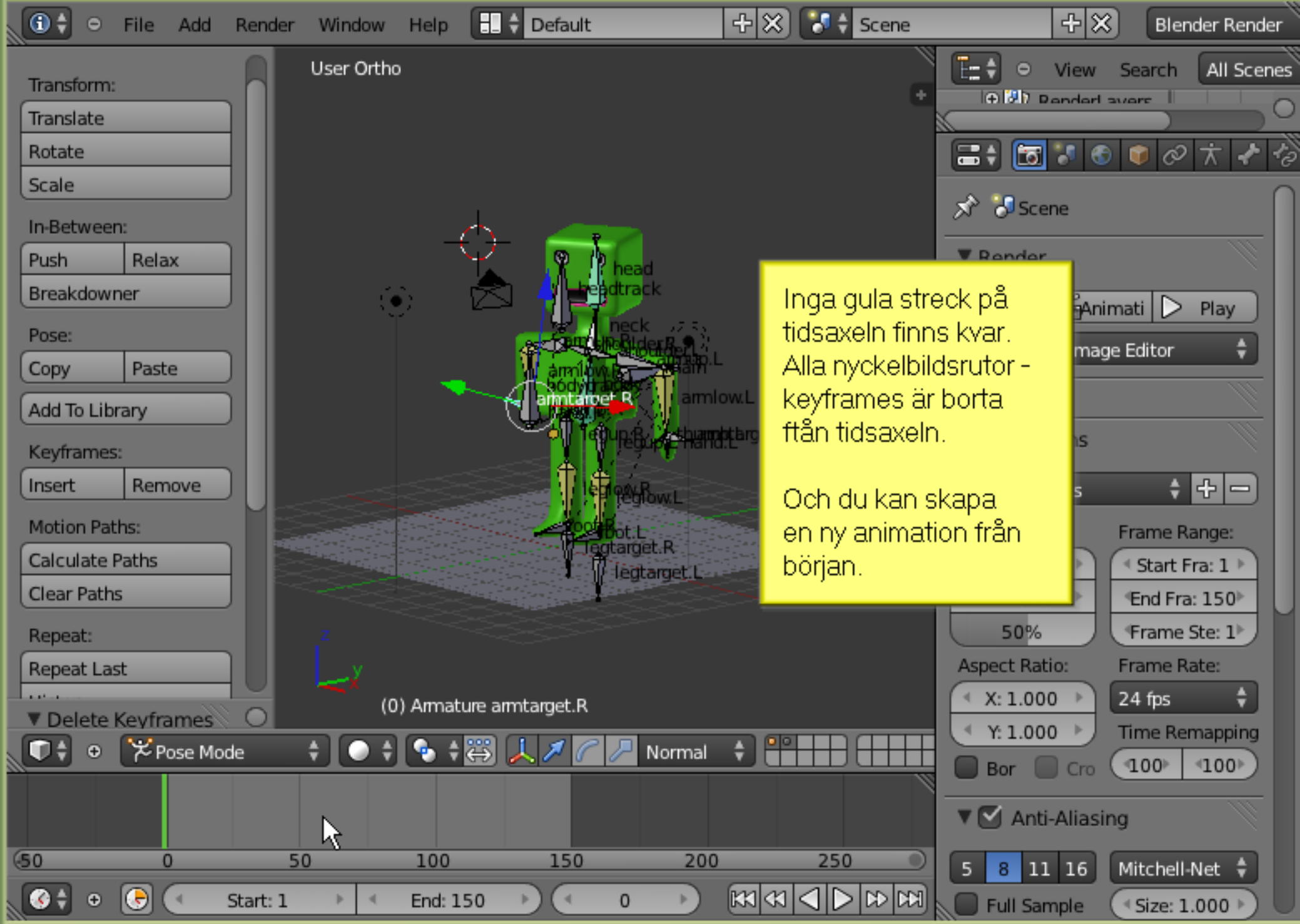


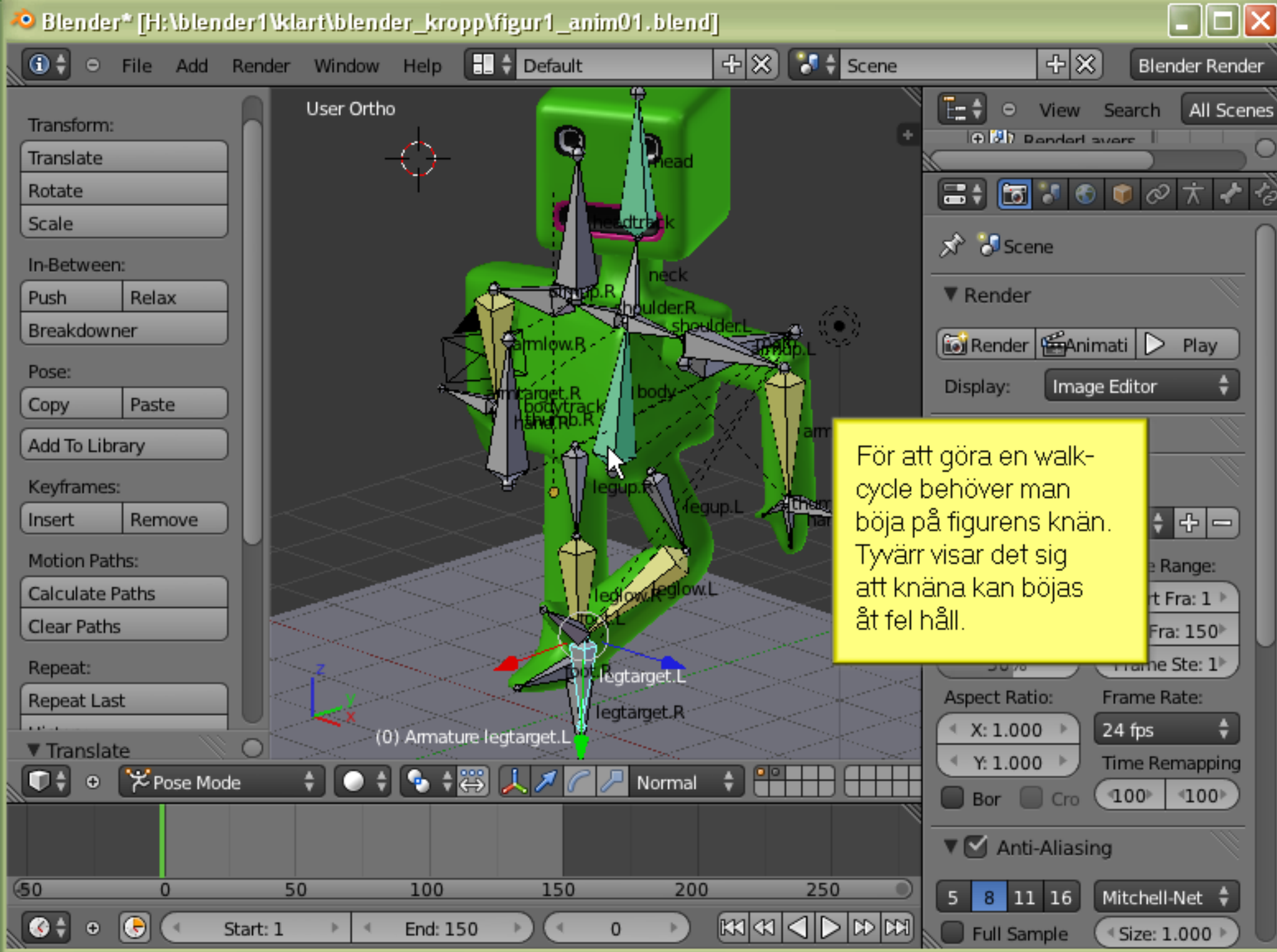
Och sen Delete-tangenten
för att ta bort alla keyframes

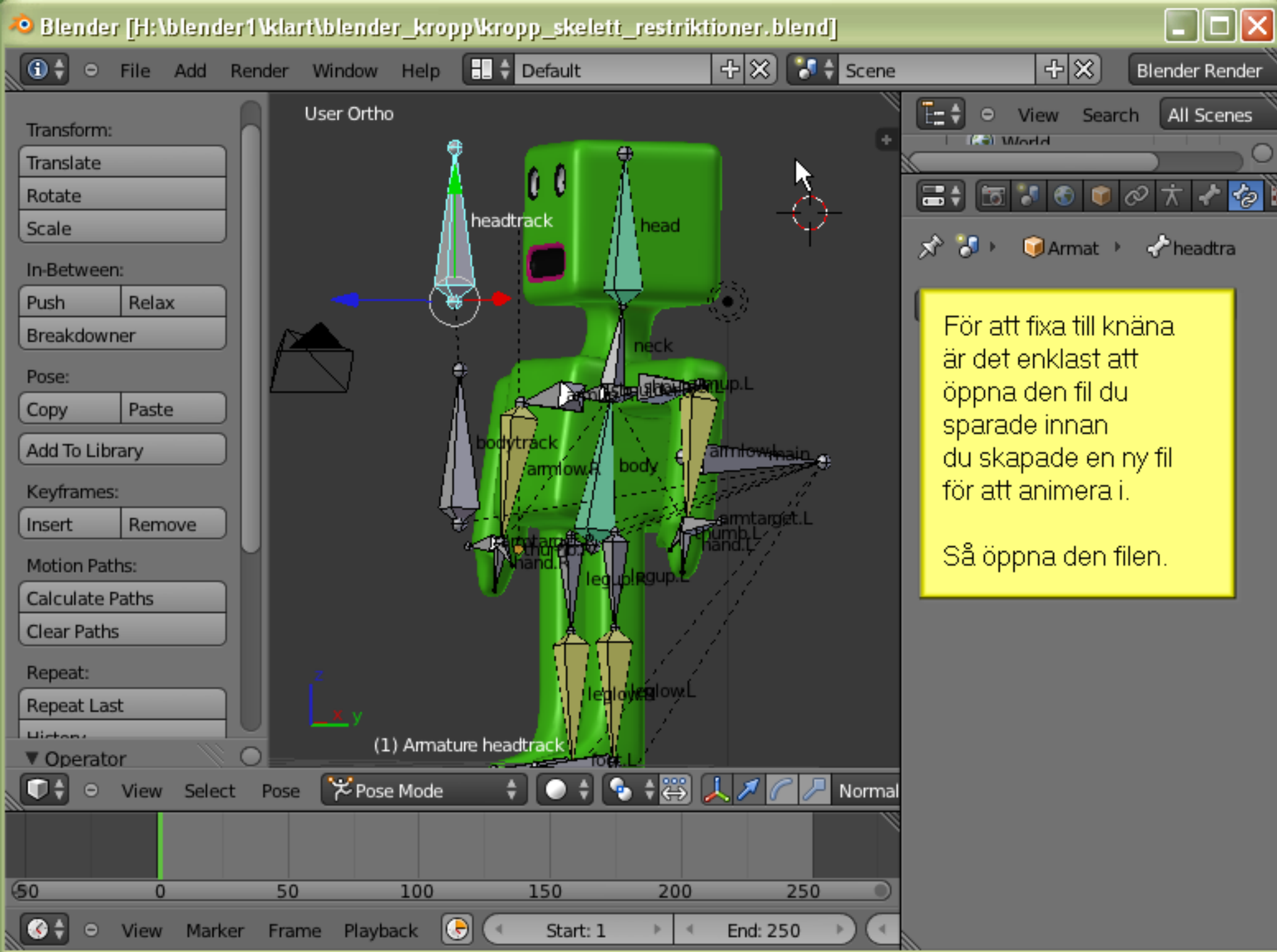
OK?
Delete Keyframes X

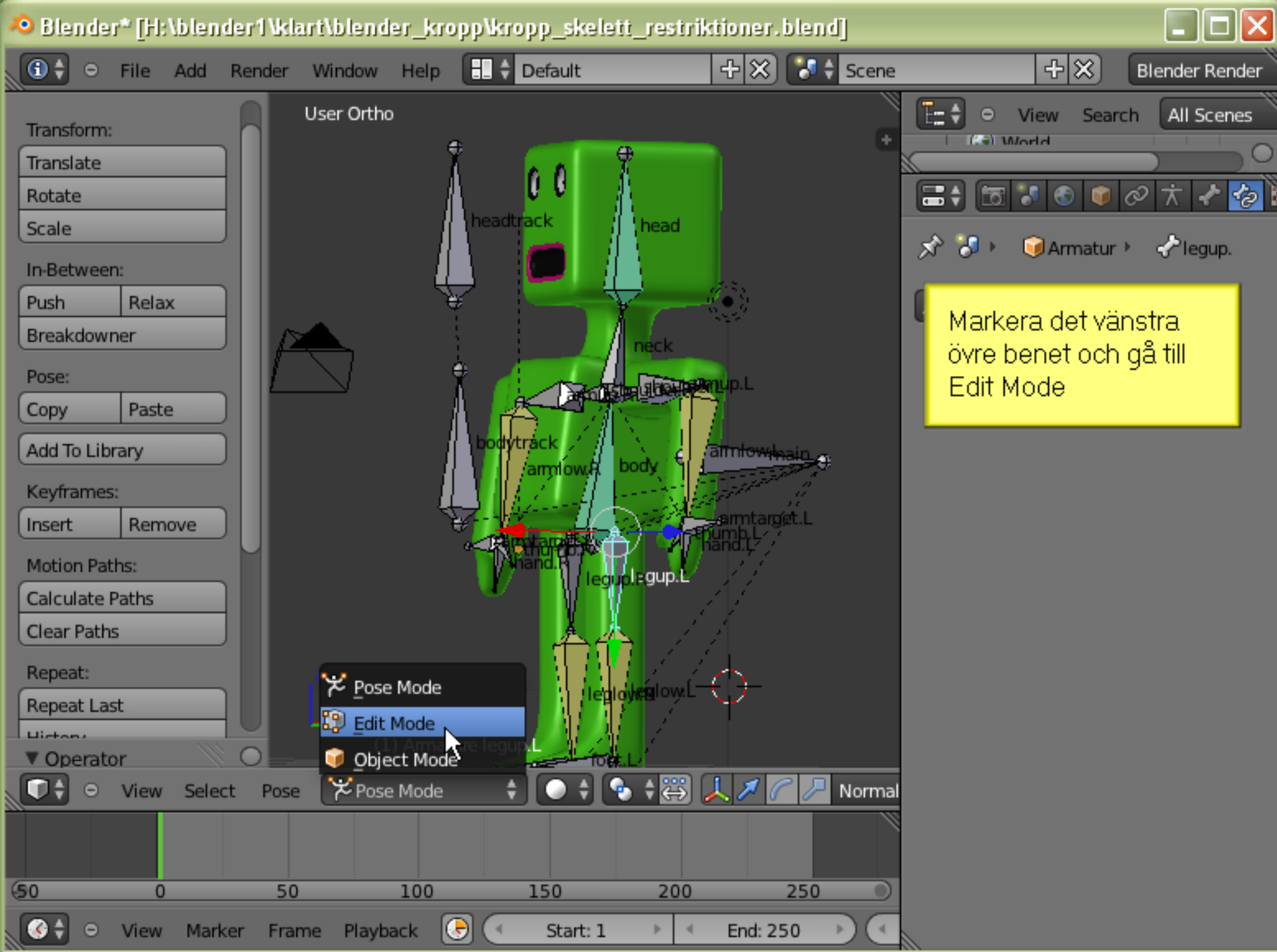
Remove all selected keyframes
Python: bpy.ops.action.delete()

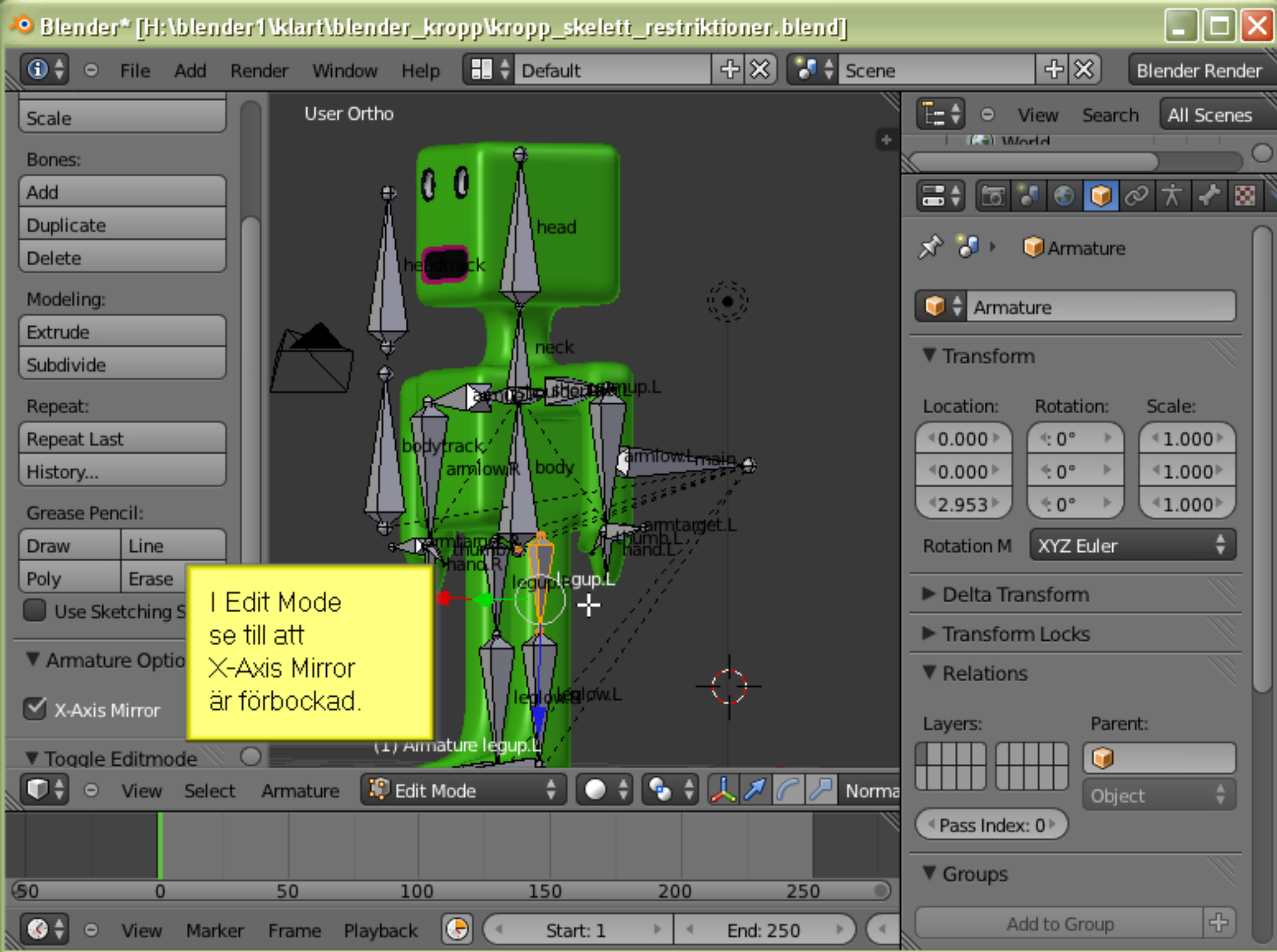


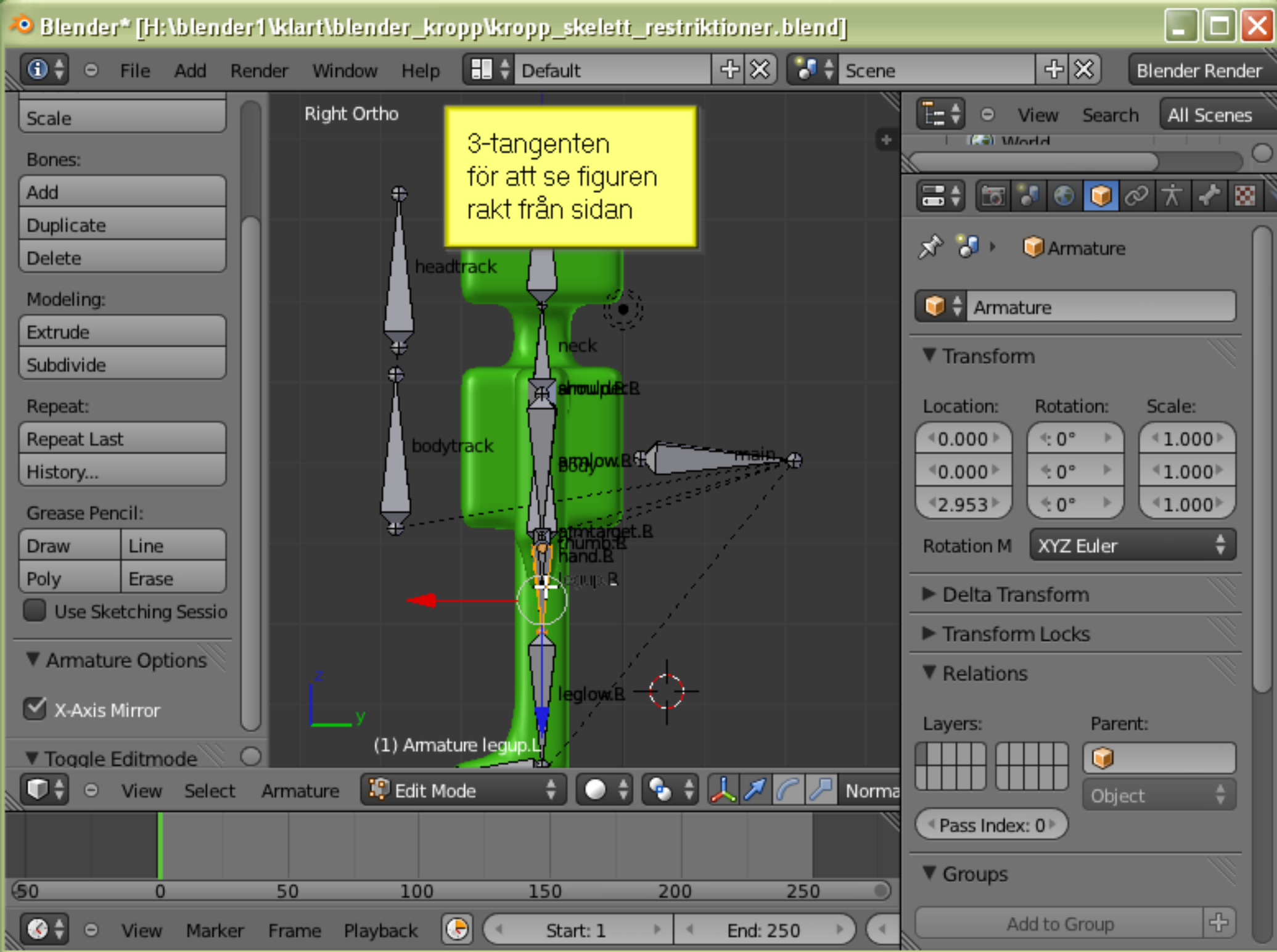


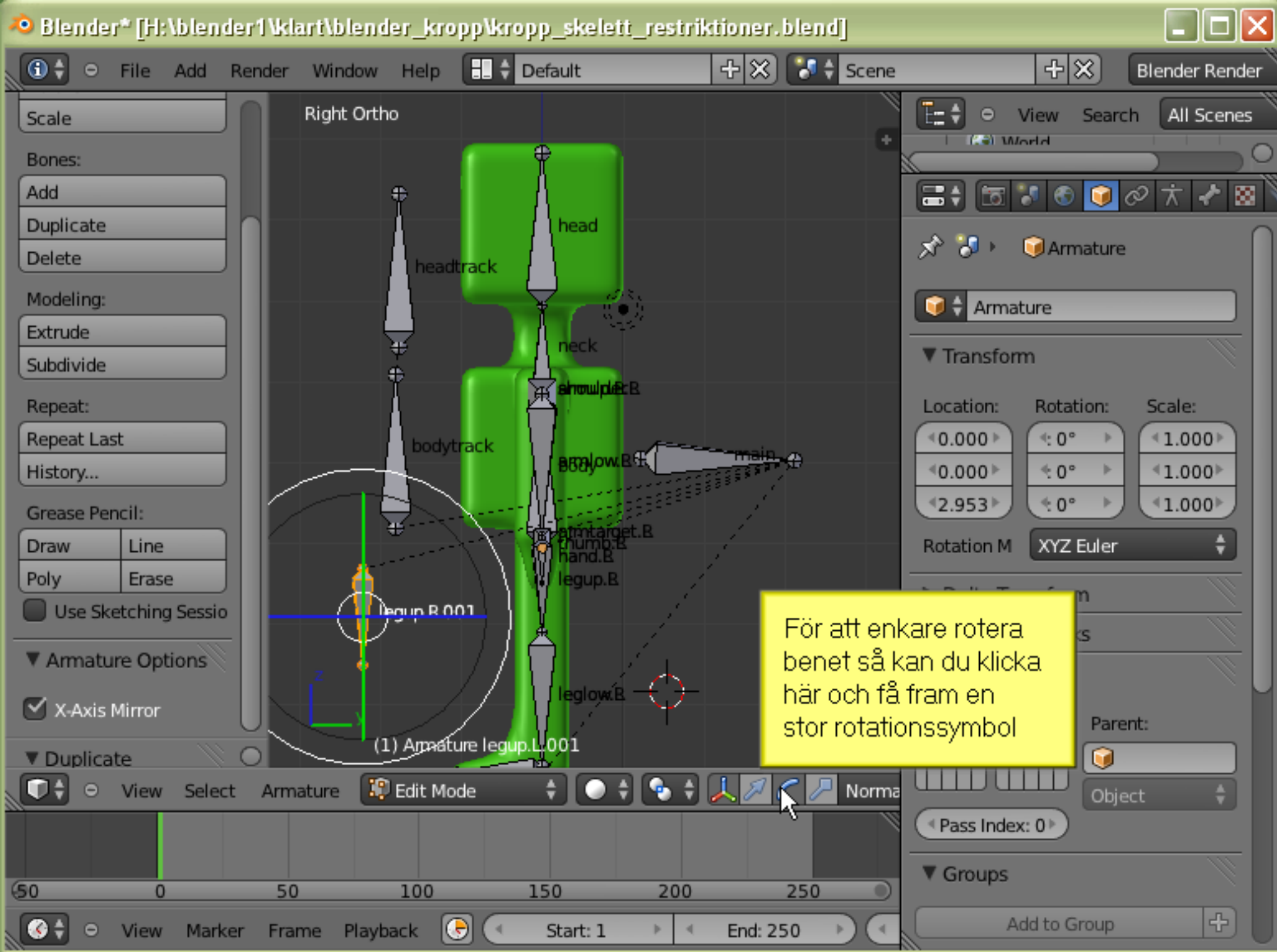




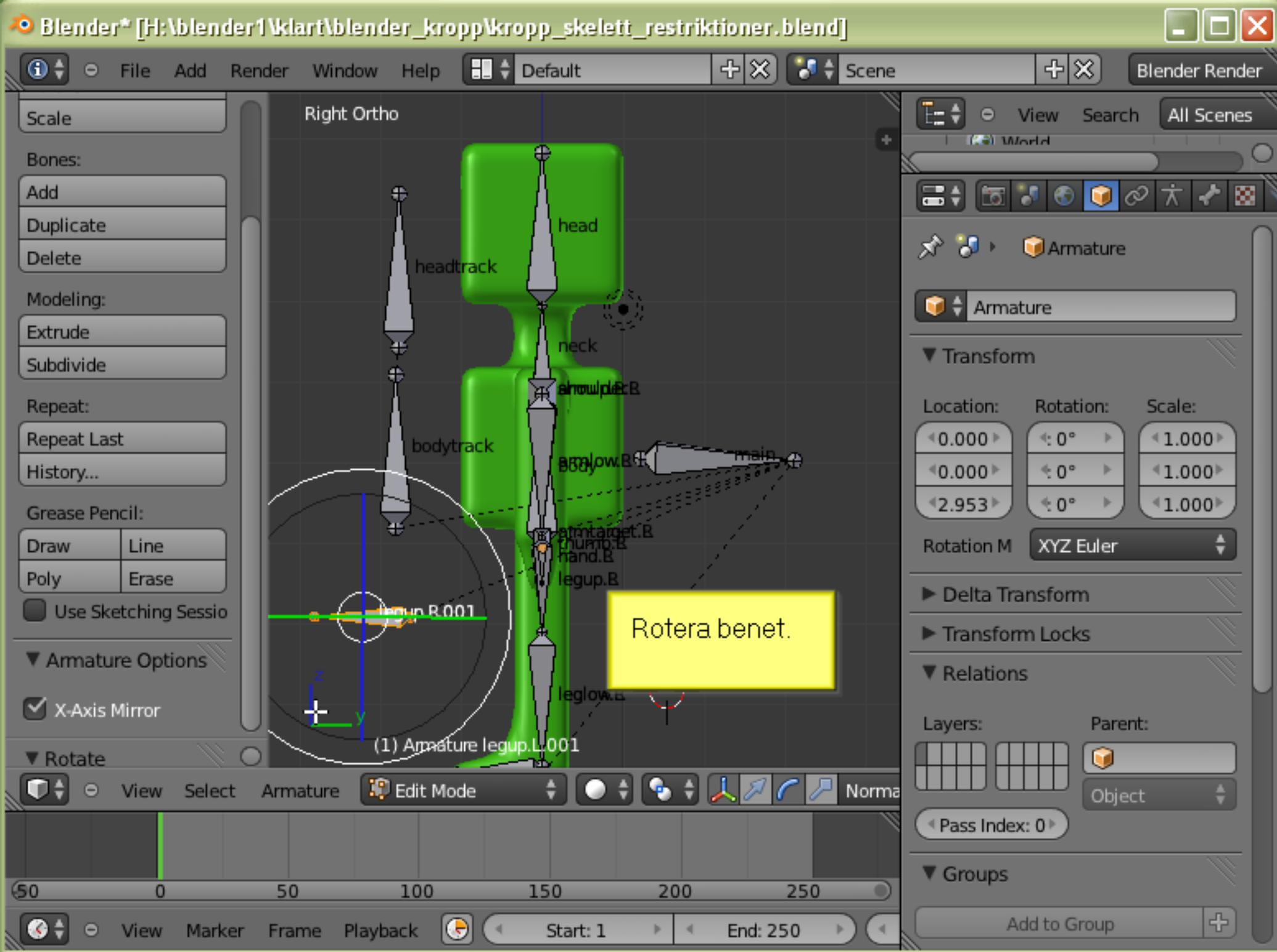


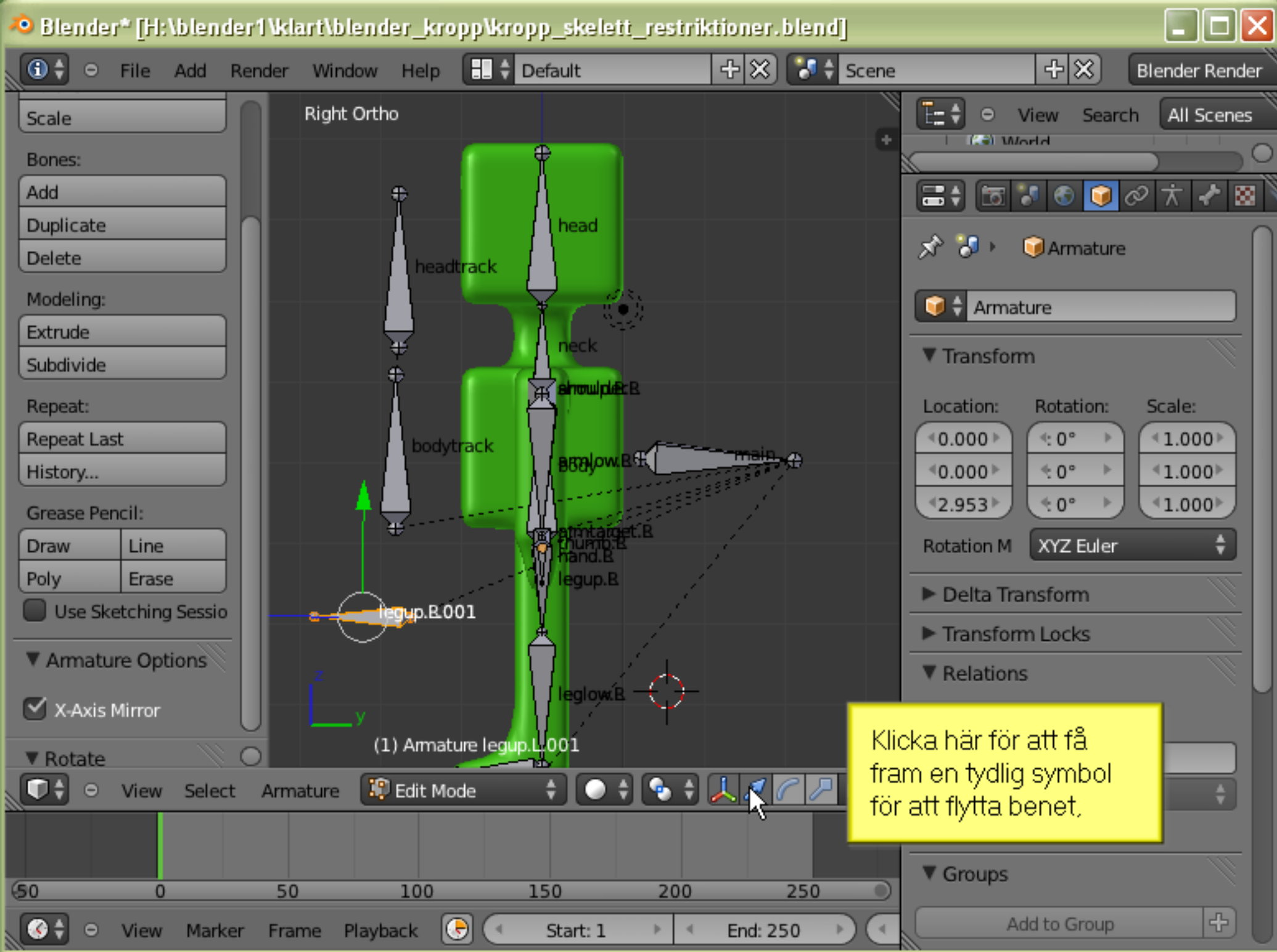


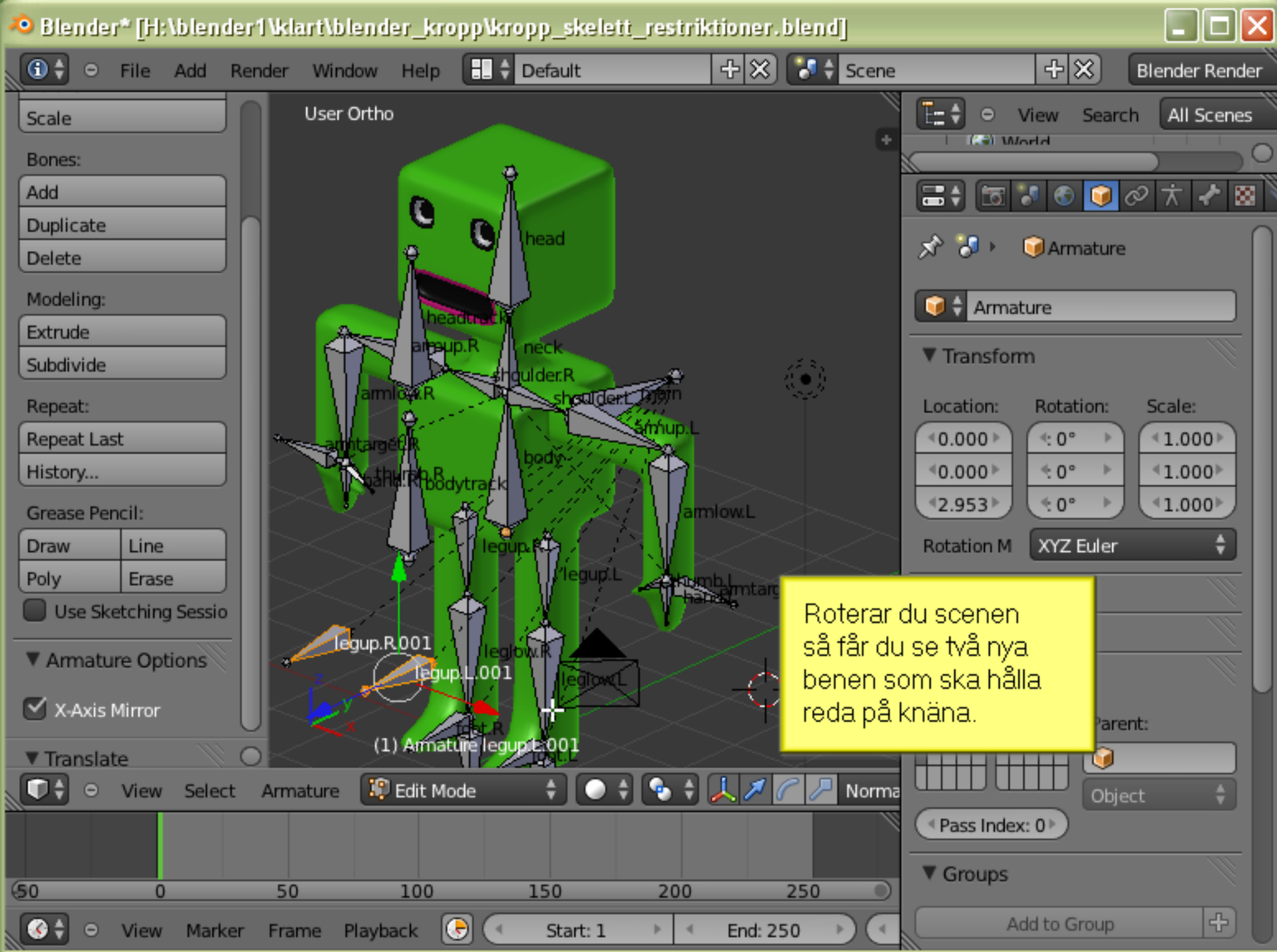


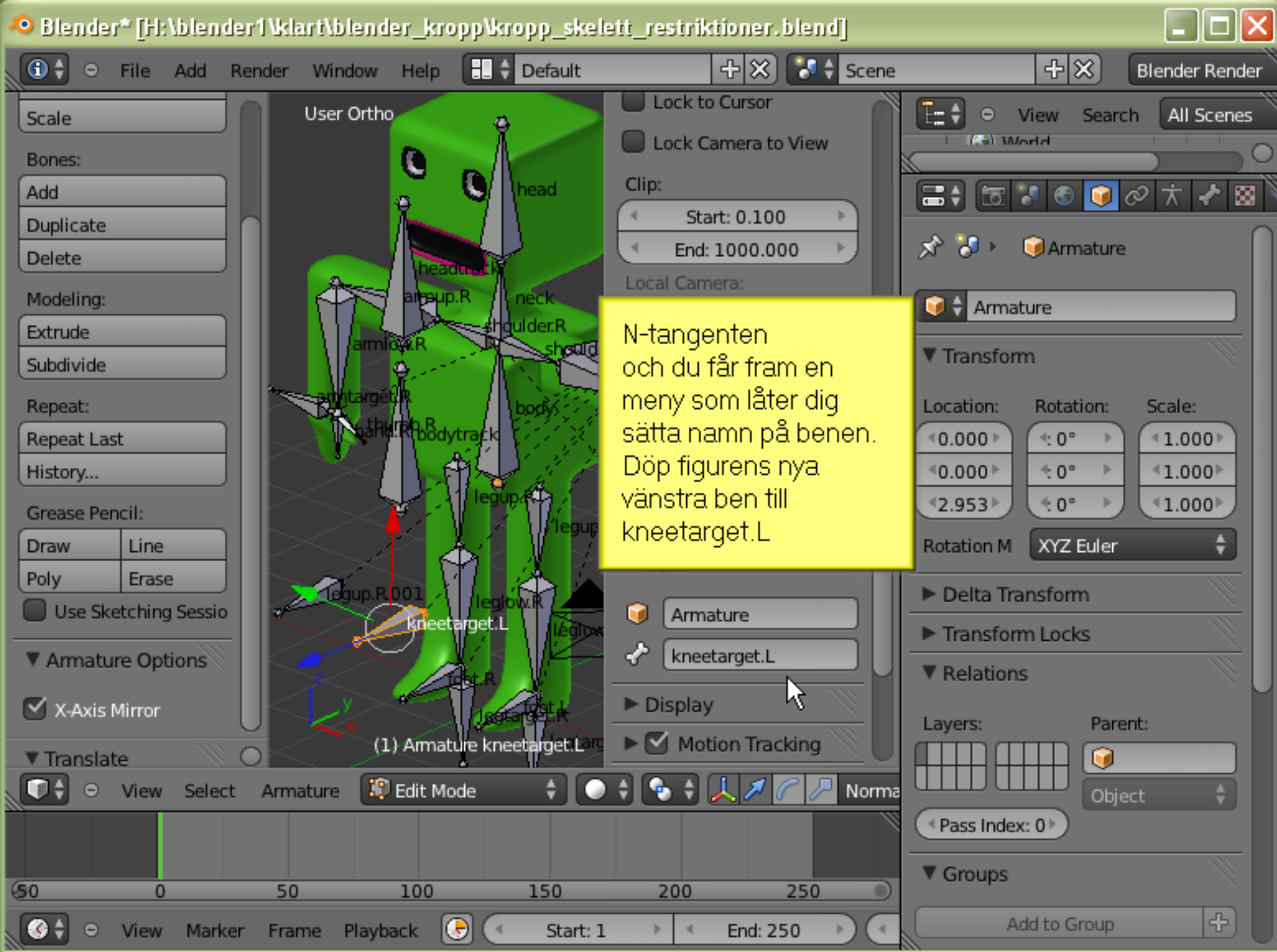


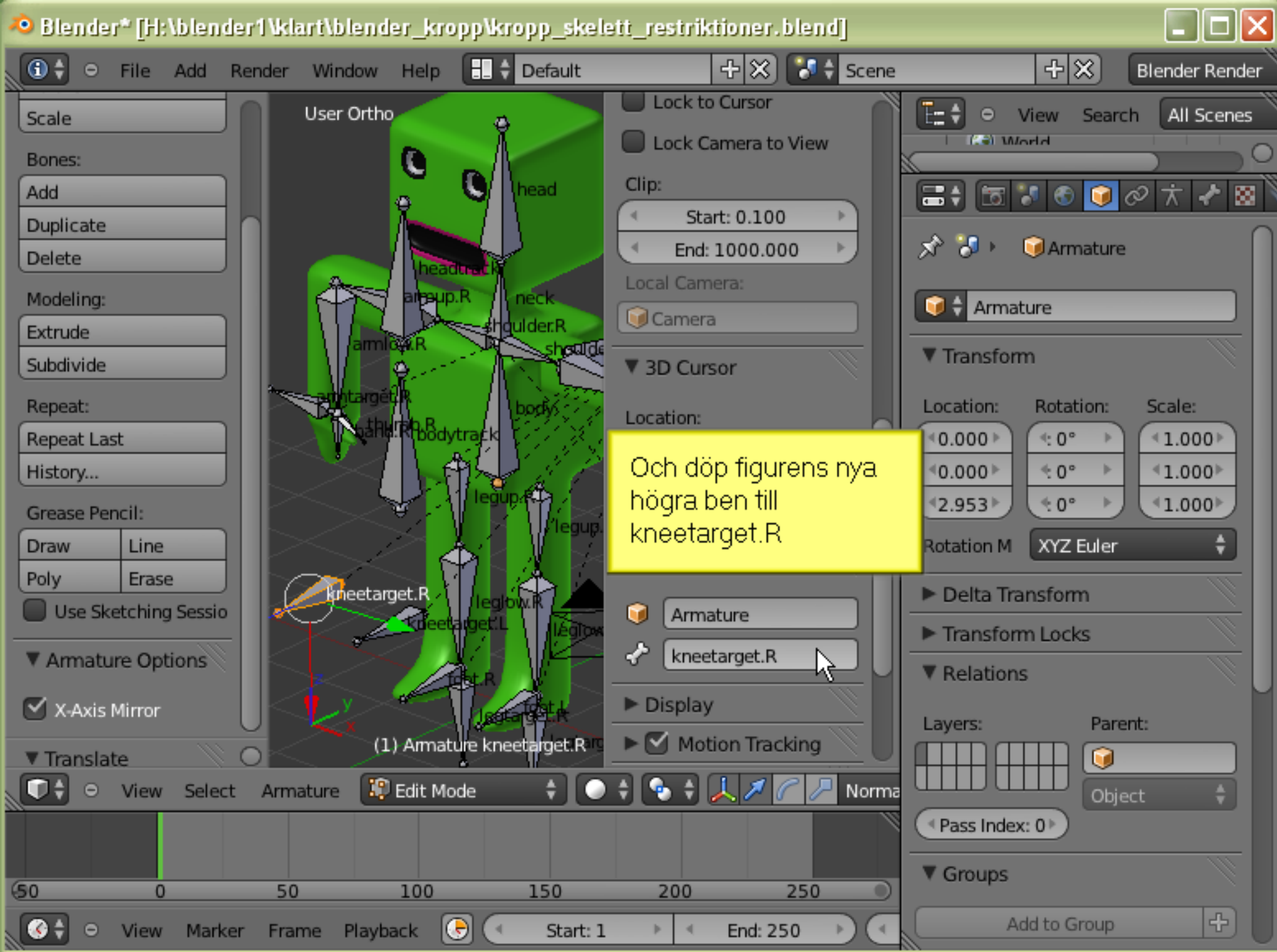
För att enkare rotera benet så kan du klicka här och få fram en stor rotationssymbol











Blender Render



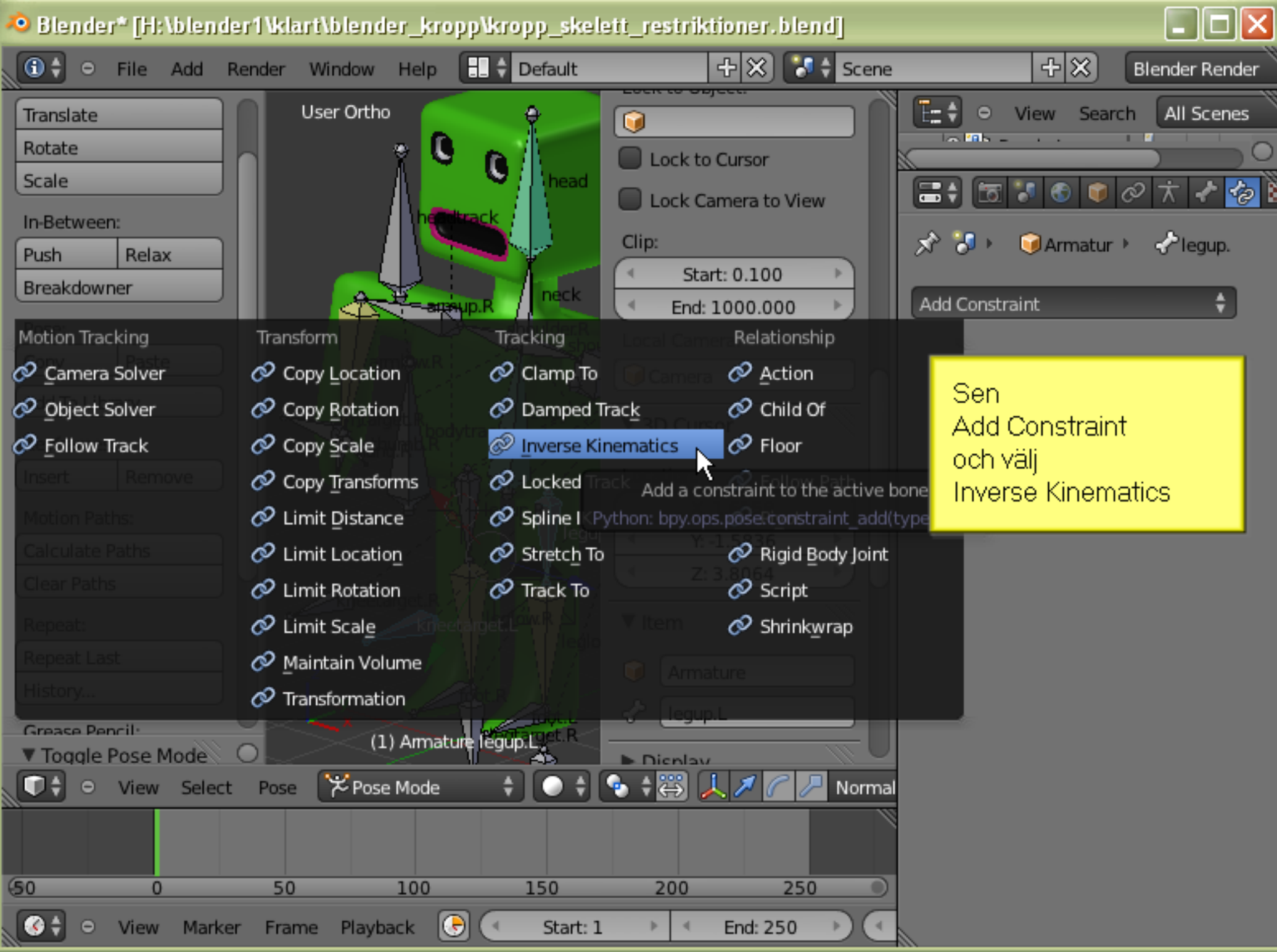
Add to Group

View Marker Frame Playback Start: 1 End: 250

End: 250

Blender interface showing a 3D model of a green character in Pose Mode. The character is labeled with various bone names: head, headtrack, neck, shoulder.R, shoulder.L, armup.R, armup.L, armlow.R, armtarget.R, thumb.R, hand.R, hand.L, legup.R, legup.L, kneetarget.R, kneetarget.L, foot.R, foot.L, and phalange.R. The interface includes a left sidebar with tools like Translate, Rotate, Scale, In-Between, Pose, Keyframes, Motion Paths, Repeat, and Grease Pencil. A central 3D Viewport shows the character in a User Ortho view. A right sidebar shows the Properties panel for the selected object, including Lock to Cursor, Lock Camera to View, Clip, Local Camera, 3D Cursor, Item, and Display. A bottom timeline shows the current frame (1) and the total number of frames (250).

Markera det nya knäbenet och sen med SHIFT markera också det övre benet.



Blender 2.79 interface showing a 3D model of a green alien character in Pose Mode. The character has a green body, a large head with eyes, and a long neck. The skeleton is visible, showing bones for the head, neck, body, arms, legs, and hands. The interface includes a top bar with 'File', 'Add', 'Render', 'Window', and 'Help' menus. The left sidebar contains various tools like 'Translate', 'Rotate', 'Scale', 'In-Between', 'Pose', 'Keyframes', 'Motion Paths', and 'Repeat'. The center 3D Viewport shows the character in 'User Ortho' view. The right sidebar shows the 'Properties' panel for the selected bone, 'legup.L', with options for 'Lock to Cursor', 'Lock Camera to View', 'Clip', 'Local Camera', and '3D Cursor'. A yellow tooltip box is overlaid on the right sidebar, displaying the text: 'Välj Target: Armature Bone: kneetarget.L'. The bottom status bar shows 'Pose Mode' and 'Normal' view.

Top Bar: File Add Render Window Help Default Scene Blender Render

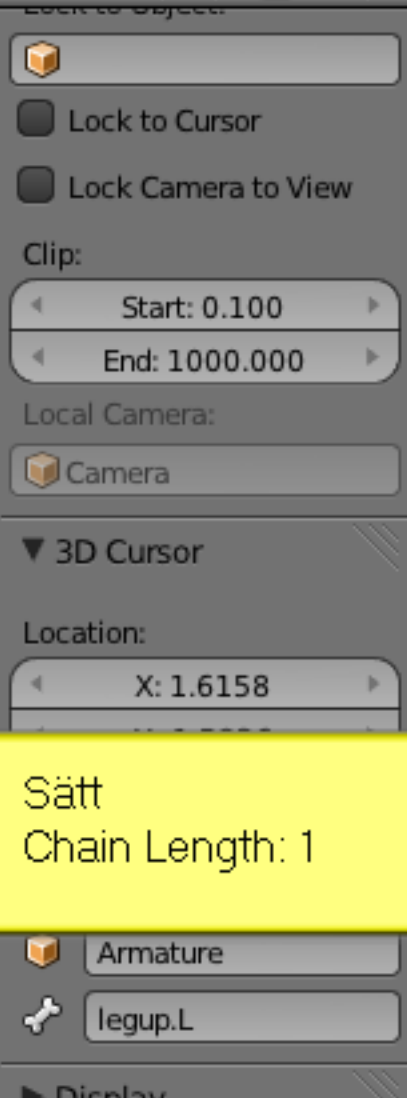
Left Sidebar: Translate Rotate Scale In-Between: Push Relax Breakdownner Pose: Copy Paste Add To Library Keyframes: Insert Remove Motion Paths: Calculate Paths Clear Paths Repeat: Repeat Last History... Grease Pencil: Add Constraint

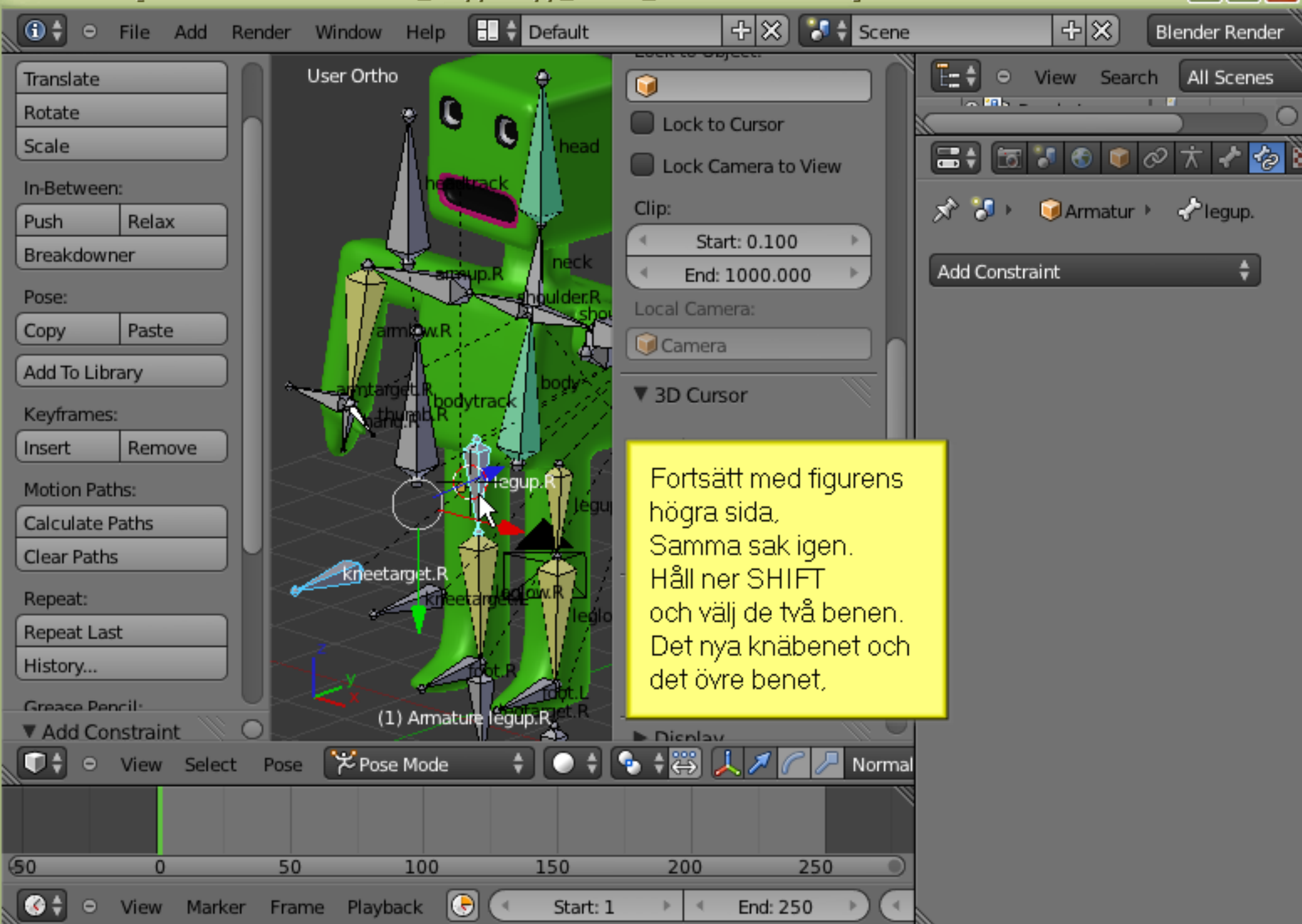
Center 3D Viewport: User Ortho, head, headtrack, neck, shoulder.R, shoulder.L, body, bodytrack, armup.R, armup.L, arm.R, arm.L, hand.R, hand.L, thumb.R, thumb.L, legup.R, legup.L, kneetarget.R, kneetarget.L, foot.R, foot.L, (1) Armature legup.L

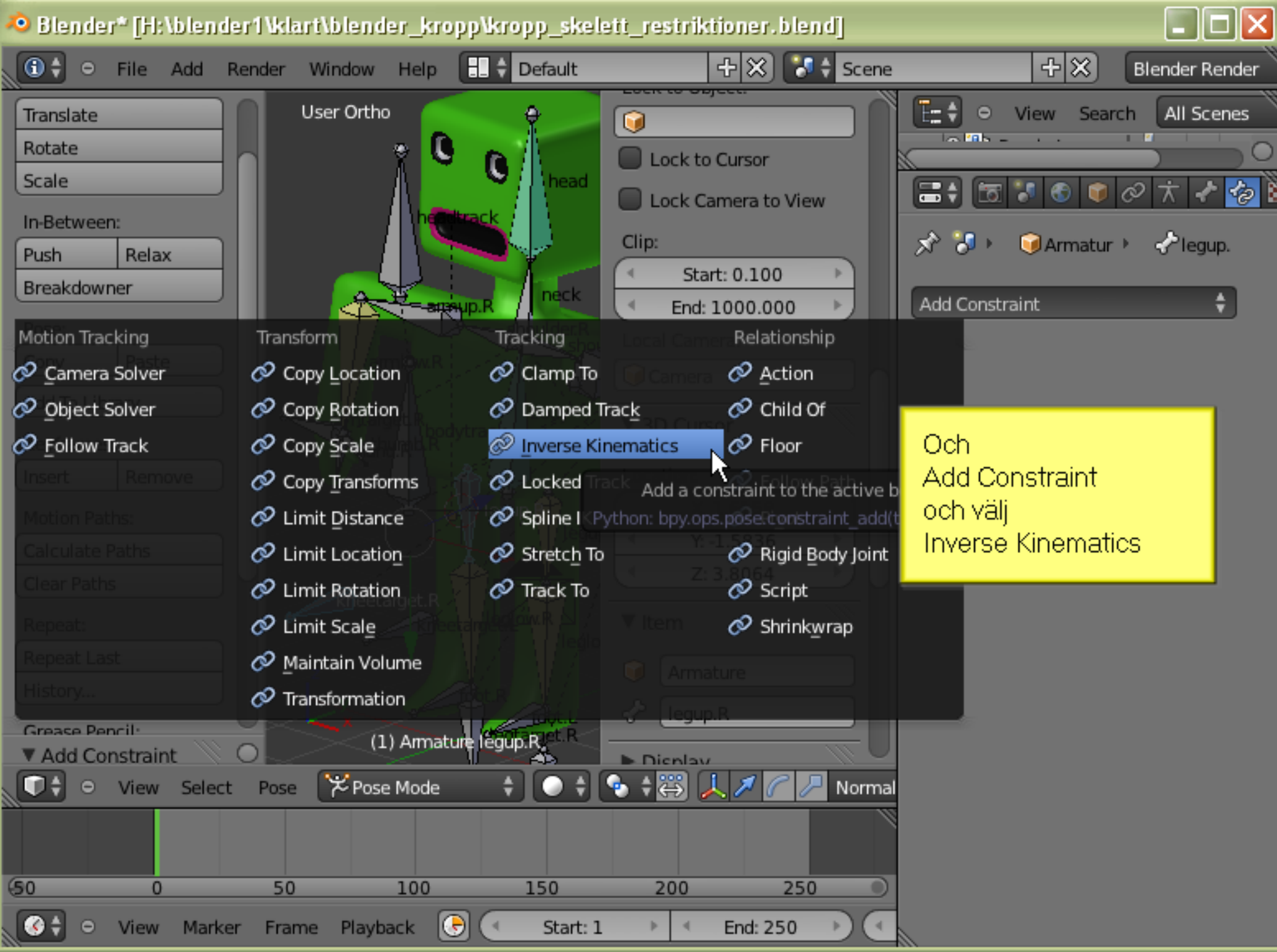
Right Sidebar: View Search All Scenes Add Constraint IK IK Target: Armature Bone: [dropdown] Pole Target: [dropdown] Ratio: 5 In Len: [dropdown] t: [dropdown] ti: 1.0 Rotat: 1.0 In

Yellow Tooltip Box: Välj Target: Armature Bone: kneetarget.L

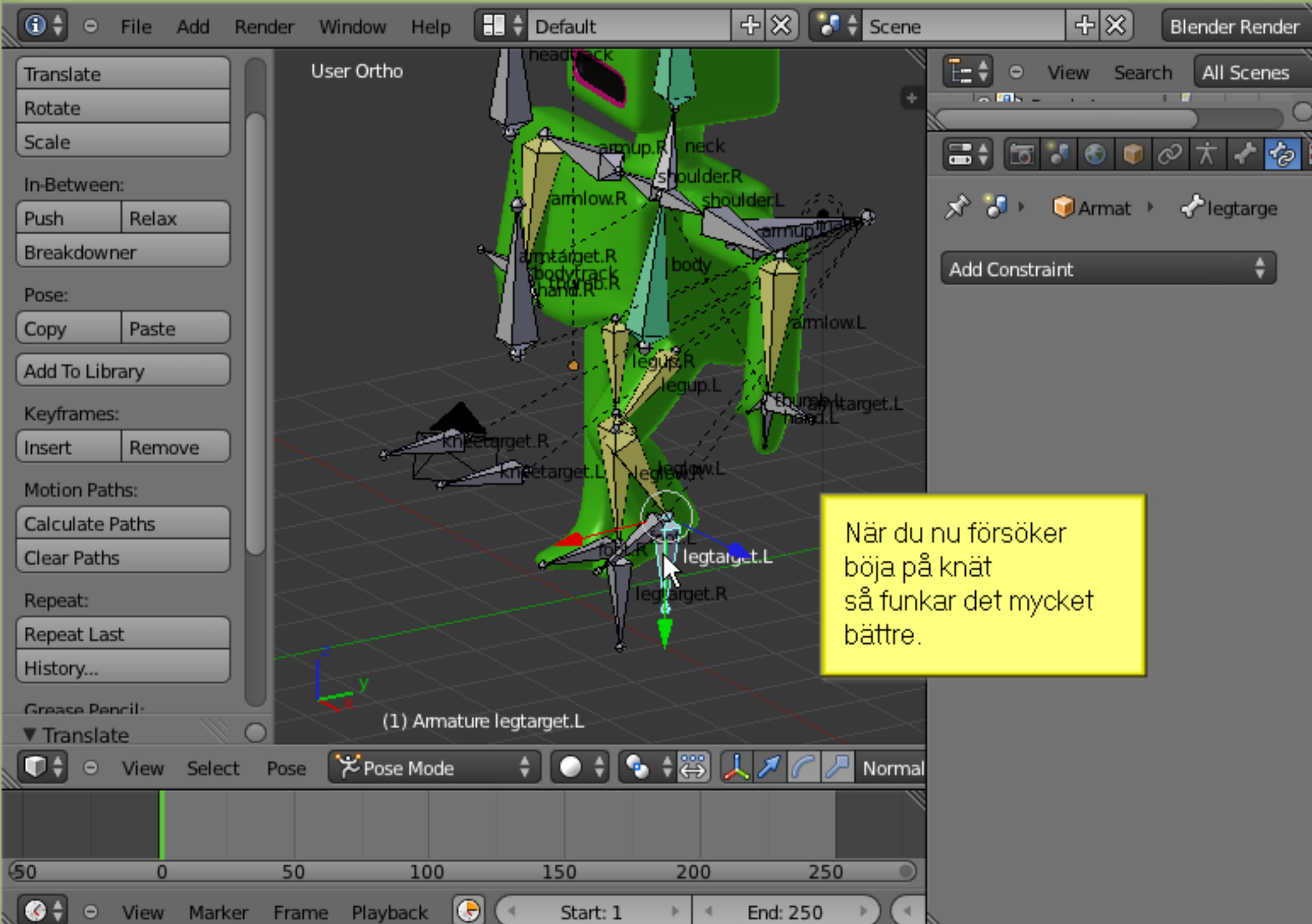
Bottom Status Bar: View Select Pose Pose Mode Normal Start: 1 End: 250

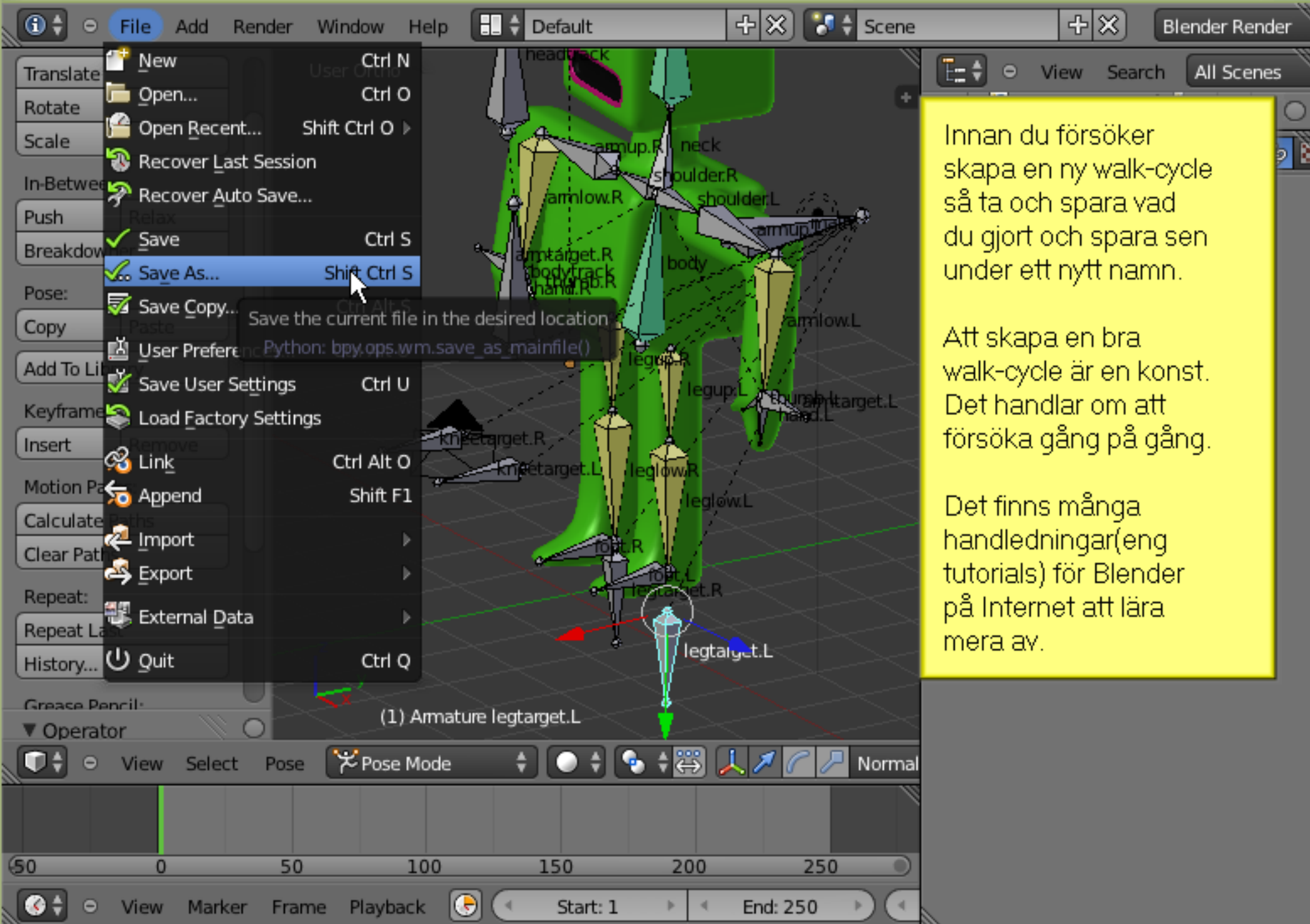






Och
Target: Armature
Bone: kneetarget.R
Chain Length: 1





Innan du försöker skapa en ny walk-cycle så ta och spara vad du gjort och spara sen under ett nytt namn.

Att skapa en bra walk-cycle är en konst. Det handlar om att försöka gång på gång.

Det finns många handledningar(eng tutorials) för Blender på Internet att lära mera av.